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Record of the

School of Public Health

1993 – 1995

The University of North Carolina at Chapel Hill

School of Public Health

University of North Carolina at Chapel Hill

1993 – 1995 Record

Announcements for the sessions 1993 – 1995

Number 1069

Although the publisher of this bulletin has made every reasonable effort to attain factual accuracy herein, no responsibility is assumed for editorial, clerical or printing errors or error occasioned by mistakes. The publisher has attempted to present information which, at the time of preparation for printing, most accurately describes the course offerings, faculty listings, policies, procedures, regulations and requirements of the University. However, it does not establish contractual relationships. The University reserves the right to alter or change any statement contained herein without prior notice.

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1993-94

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Statement on Equal Educational Opportunity

The University of North Carolina at Chapel Hill is committed to equality of educational opportunity and does not discriminate against applicants, students or employees based on color, national origin, religion, sex, age or disablility. Any complaints alleging failure of this institution to follow this policy should be brought to the attention of the Assistant to the Chancellor. Moreover, The University of North Carolina at Chapel Hill is open to persons of all races and actively seeks to promote integration by recruiting and enrolling a larger number of black students.

Policy on Nondiscrimination

It is the policy of The University of North Carolina at Chapel Hill that educational and employment decisions should be based on individuals' abilities and qualifications and should not be based on irrelevant factors or personal characteristics that have no connection with academic abilities or job performance. Among the traditional factors which are generally "irrelevant" are race, sex, religion and national origin. It is the policy of The University of North Carolina at Chapel Hill that an individual's sexual orientation be treated in the same manner. This policy prohibiting discrimination on the basis of sexual orientation does not apply to the University's relationship with outside organizations, including the federal government, the military, ROTC and private employers.

Federal Student Right-to-Know Act Data

Pursuant to the federal Student Right-to-Know Act, we report that, in 1991-92, the completion or graduation rate for students who entered The University of North Carolina at Chapel Hill in 1986 on a full-time basis was 81.7 percent.

The University of North Carolina at Chapel Hill

Mission Statement

The University of North Carolina at Chapel Hill has been built by the people of the State and has existed for two centuries as the nation's first state university. Through its excellent undergraduate programs, it has provided higher education to ten generations of students, many of whom have become leaders of the state and the nation. Since the nineteenth century, it has offered distinguished graduate and professional programs.

The University is a research university. Fundamental to this designation is a faculty actively involved in research, scholarship and creative work, whose teaching is transformed by discovery and whose service is informed by current knowledge.

The mission of the University is to serve all the people of the State, and indeed the nation, as a center for scholarship and creative endeavor. The University exists to expand the body of knowledge; to teach students at all levels in an environment of research, free inquiry, and personal responsibility; to improve the condition of human life through service and publication; and to enrich our culture.

To fulfill this mission, the University must:

acquire, discover, preserve, synthesize and transmit knowledge;

provide high quality undergraduate instruction to students within a community engaged in original inquiry and creative expression, while committed to intellectual freedom, to personal integrity and justice, and to those values that foster enlightened leadership for the State and the nation;

provide graduate and professional programs of national distinction at the doctoral and other advanced levels to future generations of research scholars, educators, professionals, and informed citizens;

extend knowledge-based services and other resources of the University to the citizens of North Carolina and their institutions to enhance the quality of life for all people in the State; and

address, as appropriate, regional, national and international needs.

This mission imposes special responsibilities upon the faculty, students, staff, administration, trustees and other governance structures and constituencies of the University in their service and decision-making on behalf of the University.

April 25, 1986, as adopted by the Board of Trustees, The University of North Carolina at Chapel Hill

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Chancellor

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Assistant to the Chancellor and Senior University Counsel

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Vice-Chancellor for Academic Affairs and Provost

John Douglas Swofford, M.Ed.
Director of Athletics

Harold Gene Wallace, M.Div.
Vice-Chancellor, University Affairs

University Calendar

Fall Semester, 1993

Wednesday, August 18 ..... Semester opens. Registration begins.
Sunday, August 22 ..... Orientation of all new freshmen and undergraduate transfer students.
Wednesday, August 25 ..... Classes begin for all students.
Tuesday, August 31 ..... Last day for late registration.
Monday, September 6 ..... Labor Day Holiday.
Tuesday, October 12 ..... University Day.
Friday, October 15 ..... Last day for submitting an application for admission to candidacy for the master's degree and for the doctoral degree for December graduation.
Wednesday, October 20 ..... Fall Recess begins at 5 p.m.
Monday, October 25 ..... Classes resume at 8 a.m.
Saturday, November 6 ..... Written examinations for master's candidates for December graduation may not be taken after this date.
Wednesday, November 24 .. Thanksgiving recess begins at 1 p.m.
Monday, November 29 ..... Classes resume at 8 a.m.
Thursday, December 9 ..... Last day of classes.
Friday, December 10 ..... Reading Day. Final signed copies of doctoral dissertations and master's theses for candidates for the December graduation must be filed in the Graduate School by this date.
Saturday, December 11 ..... Final examinations begin.
Saturday, December 18 ..... Final examinations end.

Spring Semester, 1994

Tuesday, January 4 ..... Semester opens. Registration begins.
Monday, January 10 ..... Classes begin for all students.
Friday, January 14 ..... Last day for late registration.
Monday, January 17 ..... Martin Luther King Holiday.
Friday, January 21 ..... Last day for submitting an application for admission to candidacy for the master's degree and for the doctoral degree for May commencement.
Friday, March 4 ..... Spring Recess begins at 5 p.m.
Monday, March 14 ..... Classes resume at 8 a.m.
Saturday, March 19 ..... Written examiniations for master's candidates for May commencement may not be taken after this date.
Friday, April 1 ..... Good Friday Holiday.
Wednesday, April 27 ..... Last day of classes. Final signed copies of all doctoral dissertations and master's theses must be filed in the Graduate School by this date.
Thursday, April 28 ..... Reading Day.
Friday, April 29 ..... Final examinations begin.
Friday, May 6 ..... Final examinations end.
Sunday, May 15 ..... Commencement.

UNC-CH News Services/ Dan Sears

Summer School, 1994

Note: Some summer school courses are offered on a different calendar. A list of longer and shorter courses with different starting and ending dates is included under the section "Special Sessions" in the summer school catalog or the directory of classes.

First Session

Monday, May 16 ..... Registration begins.
Thursday, May 19 ..... First day of classes.
Friday, May 20 ..... Last day for late registration.
Monday, May 30 ..... Memorial Day Holiday.
Tuesday, June 21 ..... Last day of classes.
Wednesday, June 22 ..... Reading Day.
Thursday, June 23 ..... Final examinations begin.
Friday, June 24 ..... Final examinations end.

Second Session

Thursday, June 23 ..... Registration begins.
Tuesday, June 28 ..... First day of classes.
Wednesday, June 29 ..... Last day for late registration.
Monday, July 4 ..... Independence Day Holiday.
Friday, July 29 ..... Last day of classes.
Saturday, July 30 ..... Reading Day.
Monday, August 1 ..... Final examinations begin.
Tuesday, August 2 ..... Final examinations end.

UNC-CH News Services/ Dan Sears

Fall Semester, 1994

Wednesday, August 17 ..... Semester opens.
Sunday, August 21 ..... Orientation/Academic counseling.
Wednesday, August 24 ..... First day of classes.
Tuesday, August 30 ..... Last day for late registration.
Monday, September 5 ..... Labor Day Holiday.
Wednesday, September 28 ..... Fall Recess begins at 5 p.m.
Monday, October 3 ..... Classes resume at 8 a.m.
Wednesday, October 12 ..... University Day Holiday.
Wednesday, November 23 ..... Thanksgiving Recess begins at 1 p.m.
Monday, November 28 ..... Classes resume at 8 a.m.
Wednesday, December 7 ..... Last day of classes.
Thursday, December 8 ..... Reading Day.
Friday, December 9 ..... Reading Day.
Monday, December 12 ..... Final examinations begin.
Monday, December 19 ..... Final examinations end.

Spring Semester, 1995

Thursday, January 5 ..... Semester opens.
Monday, January 9 ..... First day of classes.
Friday, January 13 ..... Last day for late registration.
Monday, January 16 ..... Martin Luther King Holiday.
Friday, March 3 ..... Spring recess begins at 5 p.m.
Monday, March 13 ..... Classes resume at 8 a.m.
Friday, April 14 ..... Good Friday Holiday.
Wednesday, April 26 ..... Last day of classes.
Thursday, April 27 ..... Reading Day.
Friday, April 28 ..... Reading Day.
Saturday, April 29 ..... Final examinations begin.
Saturday, May 6 ..... Final examinations end.
Sunday, May 14 ..... Commencement.

Summer School, 1995

Note: Some summer school courses are offered on a different calendar. A list of longer and shorter courses with different starting and ending dates is included under the section "Special Sessions" in the summer school catalog or the directory of classes.

First Session

Thursday, May 18 ..... First day of classes.
Friday, May 19 ..... Last day for late registration.
Monday, May 29 ..... Memorial Day Holiday.
Tuesday, June 20 ..... Last day of classes.
Wednesday, June 21 ..... Reading Day.
Thursday, June 22 ..... Final examinations begin.
Friday, June 23 ..... Final examinations end.

Second Session

Tuesday, June 27 ..... First day of classes.
Wednesday, June 28 ..... Last day for late registration.
Tuesday, July 4 ..... Independence Day Holiday.
Friday, July 28 ..... Last day of classes.
Saturday, July 29 ..... Reading Day.
Monday, July 31 ..... Final examinations begin.
Tuesday, August 1 ..... Final examinations end.

Admission Policies

The applicant must hold the bachelor's or master's degree from an accredited college or university with a grade average of B or better in the major subject area and must present credentials showing the completion of prerequisite courses for the special field he or she proposes to undertake in a graduate program. Only applicants with academic records of high quality should seek admission.

Graduate Record Examination scores are required for all applicants. The test should be taken no later than October to insure that scores will be submitted in time to process the application for fall admission. Applicants whose native language is not English are required to submit acceptable scores on the Test of English as a Foreign Language (TOEFL).

Work done in absentia will not be counted for graduate credit. However, in certain cases approved by the University Administration, part of the work on the thesis for a higher degree may be done elsewhere. All such work, even when credited, is subject to the final examination required for the degree.

All master's degrees are terminal degrees. To enroll in the doctoral program, the student must receive approval of the department and be readmitted to the Graduate School.

North Carolina law requires all students new to the University to document immunization records or undergo vaccination. Failure to comply results in cancellation of registration 30 days after classes begin.

Diversity among student backgrounds and points of view is desired. To that end, admissions committees also consider an applicant's accomplishments and personal qualities that are brought to their attention by the applicant or by his or her references. A careful evaluation of accomplishments and promise is at the heart of the process.

Application

A nonrefundable fee of $45 must be submitted with the Application for Admission to the Graduate School.

The program of study in the School of Public Health is arranged in a sequence which makes it advisable for students to enter the School in the fall semester. Admission at other times is granted only for exceptional reasons.

Letters of inquiry regarding admission and requests for application forms should be addressed to the Director of Student Services, School of Public Health, CB# 7400, Rosenau Hall, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-7400. The application deadline is January 31 for the following fall semester. Some departments may accept applications beyond this deadline if space is available. Prospective students should check with the department before submitting an application after the January 31st deadline.

An individual can be considered for a Graduate School award only when all materials are received by January 31. Information about School of Public Health traineeships, scholarships and other financial assistance appears on pages 24–25 of this catalog. Additional information can be obtained from the departments.

An applicant who has been offered admission reserves his or her place by payment of a $50 nonrefundable enrollment deposit which is credited against the first semester tuition. Advance deposits are not refundable if the applicant fails to enroll. Checks should be made payable to The University of North Carolina. Payment should be mailed directly to the University Cashier, CB #1400, 103 Bynum Hall, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-1400, along with an Admission and Deposit Record.

No payment should be sent either to the Graduate School, to the School of Public Health, or to the department of one's major. Due to the number of applicants, a place will not be held if this deposit is not received within three weeks of the date of the admission letter.

Students who make the deposit and who attend the University on a fellowship, traineeship, or other award which pays the entire cost of tuition and fees directly to the University may obtain refund of the deposit after November 1.

Tuition and Fees

Tuition and fees are assessed on a semester basis and bills are sent at specified times. Payments may be made in advance, in person or by mail. Payments may be mailed to: University Cashier, The University of North Carolina at Chapel Hill, CB# 1400, 103 Bynum Hall, Chapel Hill, NC 27599-1400. Checks should be made payable to The University of North Carolina. The student's social security number should be shown on the face of the check. Accounts not paid in full are subject to a late payment fee and the student's possible registration cancellation. (Tuition and fees are subject to change without notice. Additional field fee courses may be established. These schedules have been revised to reflect the telephonic registration fee of $5 for Spring 1993.)

Graduate tuition and fees per semester for bona fide residents of North Carolina are $892.35. For out-of-state students, tuition and fees per semester are $3,931.35. All new graduate students are required to pay an Orientation Fee of $8 and an ID card fee of $5 for their initial semester.

In addition, the following courses require field experience for which there is a fee:

BIOS 191	$ 25	HPAA 209	$450
ENVR 164	$175	MHCH 214	$350
ENVR 165	$200	NUTR 140	$25
HBHE 90	$100	NUTR 220	$450
HBHE 240	$450	NUTR 252	$450
HBHE 340	$125	NUTR 253	$50
HBHE 341	$125	PHNU 196	$150
HBHE 342	$125	PHNU 272	$450
HBHE 343	$125	PHNU 301	$150
HPAA 98	$200	PHNU 396	$450

For up-to-date information on field fees contact the Dean's Office, School of Public Health, or department of choice.

Undergraduate tuition and fees per semester for residents of North Carolina are: $642.10; for out-of-state students, $3,934.10.

The curricula of some departments extends through a summer period of 12 weeks. Tuition and fees for summer terms are prorated by number of hours taken. Maximum rates (9 hours or more) for each five-and-one-half week period for graduate students are $741.10 for in-state and $3,780.10 for out-of-state students.

Thesis – 0 credit hours (courses numbered 393-394) for in-state is $406.35 and out-of-state is $884.35 per semester or $140.10 in-state and $302.10 out-of-state per summer term.

The last day to drop a course for credit on student financial accounts is two weeks after the first day of classes for each semester.

Withdrawals are prorated over a period of nine weeks at a rate of one-tenth of the semester's bill after deduction of a $25 administrative charge. The last date for credit on student financial accounts for withdrawal is nine weeks after registration.

Statutory Provisions Offering Lower Tuition Rates

The 1983 North Carolina General Assembly revised G.S. 116-144 to direct the Board of Governors of the University of North Carolina to fix the tuition and required fees charged to nonresident students. The Board of Governors identified two groups of nonresident students to which special tuition rates would be extended: undergraduate students deemed by their institutions to have special talents and qualifications and who are thereby awarded a scholarship of at least $250 per academic year and graduate students who serve as teaching assistants or research assistants or in similar instructional or research assignments and who are paid a stipend of at least $2,000 per academic year.

A qualifying assistantship entitles the recipient to the privilege of paying tuition and fees at the same rate that is charged residents of the state of North Carolina for tuition purposes. The difference in the cost of tuition and fees for nonresidents and that for residents is provided as a scholarship in recognition of special talents and qualifications and does not represent compensation for the service component of the assistantship. All students are responsible for being aware of the requirements concerning residence status. A full summary of information on these provisions is set out in the Appendix.

Transportation and Parking

Any person parking a motor vehicle on campus between 7:30 a.m. and 5 p.m., Monday through Friday (7:30 a.m. – 9 p.m. in resident student areas) must display the appropriate permit for that lot or parking area. After 5 p.m. students may park in any unreserved employee parking area without being cited.

Any student, except freshmen, may apply for a parking permit but the number of permits available is limited. Charges vary according to zone location. Pre-registration for the fall term is during the month of April for currently enrolled students. Permits are assigned according to Student Government recommendations. Students are responsible for being familiar with all parking regulations. The campus map has a summary of the rules and regulations and will be helpful in avoiding citations. Warning: Firelanes and areas zoned for permit parking are strictly enforced. Parking in violation could result in fines and possible towing.

Bus passes are available for purchase each day at the UNC-Chapel Hill Transportation and Parking Office located off of Manning Drive near Morrison Dorm. Regular window hours are from 7:30 a.m. – 5 p.m. Monday through Friday.

Student Services

Housing

University housing is an integral part of the educational program. The primary objective of the Department of University Housing is to provide eligible students a supportive environment within which to live while attending the University.

The physical quality and the integrity of the buildings are maintained at a level conducive to security and comfort in the belief that provision of a safe and healthy living environment supports and contributes to the learning process.

Information regarding residence hall accommodations is available by writing to: Department of University Housing, Contracts Office, CB# 5500 Carr Building, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-5500.

A brochure and application regarding student family housing is available by writing to Student

Family Housing Office, The University of North Carolina at Chapel Hill, CB# 5510, Community Services Building, Chapel Hill, North Carolina 27599-5510.

Some graduate students are housed in privately owned Granville Towers, which is located just off the UNC-CH campus about one block from the Carolina Inn. The three towers of these supervised residence halls have a cafeteria dining commons. The fee charged includes room and board. Information is available from Granville Towers Business Office, University Square, Chapel Hill, NC 27514-6201.

UNC-CH News Services/ Dan Sears

Student Health Service

The Student Health Service (SHS), a member of the Division of Student Affairs, is located in a facility in the northeastern corner of the medical center complex and has overall responsibility for the health care of all students in the University. Students who pay the student health fee for the current semester or summer session are eligible for health care in the SHS. The fee covers the cost of all services provided by SHS professionals including physicians, physician extenders, physical therapists and mental health professionals. Laboratory and X-ray studies done at SHS require a nominal co-payment. Additional charges are made for inpatient rooms, drugs, miscellaneous supplies, and laboratory and X-ray studies which must be obtained from UNC Hospitals or other outside laboratories. Spouses not enrolled in the university as students are eligible by paying the student health fee.

The SHS provides a comprehensive program of health care delivery including general outpatient and inpatient medical care, a pharmacy and specialized clinics. Preventive services include immunizations and those other preventive services normally expected in any community or public health service facility. The Wellness Resource Center, staffed by SHS and trained peers, provides workshops, groups and information on fitness, nutrition, human sexuality, contraception, relaxation and alcohol abuse prevention.

Students are seen by appointment during regular office hours Monday through Friday and one half day on Saturday. Refer to the phone directory for the correct numbers for the various clinics. After regular office hours and on weekends, nurses are available for acute care with medical and psychiatric backup. In general, students should go to the SHS first. Major problems may be referred to the UNC Hospitals Emergency Room. Students should be aware that UNC Hospitals services are not covered by the student health fee.

Because your health fee does not cover hospitalization, surgery and intensive care, it is strongly recommended that you have additional health insurance. See the Graduate School Catalog for additional information.

Recreation

The University gymnasia, swimming pools, tennis courts, golf course and large athletic fields provide ample facilities for exercise and recreation. All are under the supervision and direction of a well-organized Department of Physical Education.

Alcoholic Beverages

A policy on student possession and consumption of alcoholic beverages in facilities of The University of North Carolina at Chapel Hill has been promulgated by the Vice Chancellor for Student Affairs, with the approval of the Chancellor, to inform students of the conditions under which alcoholic beverage use consistent with federal, state, and local laws and ordinances is permitted in University facilities and on University property. Copies of the policy may be obtained from the Office of the Dean of Students or the Associate Vice Chancellor for Student Affairs; both are located in Steele Building.

Drug Policy (See Appendix for complete policy)

Students, faculty members, administrators and other employees of The University of North Carolina at Chapel Hill are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the University community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the University. Also, recent federal legislation requires, as a condition of employment, that any faculty or staff member engaged in the performance of a federal grant or contract must abide by the University's Drug Policy and must notify his or her dean, director, or department chair of any criminal drug statute conviction for a violation occurring in the work place not later than five days after the conviction.

Every student, faculty member, administrator, and other employee of the University is responsible for being familiar with and complying with the terms of the Policy on Illegal Drugs adopted by the Board of Trustees.

Smoking

In fall 1975 by student referendum and Faculty Council action, smoking in classes was banned.

Beginning November, 1988, a no-smoking policy was instituted for all School of Public Health facilities which include all areas (classrooms, hallways, elevators, restrooms, lounges and private offices in Rosenau and McGavaran-Greenberg Halls). This ban prohibits the use of all tobacco products, including cigarettes, cigars and pipes.

Libraries

The Health Sciences Library is situated across the street from Rosenau Hall, School of Public Health. The library has an excellent collection to support curricular, research, and patient care information needs consisting of approximately 250,000 volumes and 10,000 serial titles, over 4,400 of which are currently received.

Information Services librarians are available to aid users in locating information, to instruct in the use of library resources and to provide additional resource assistance. Online search services, with access to MEDLINE and about a hundred other databases, are also provided. Direct access to databases is offered in an electronic information center. Information Management Education Services faculty offer a variety of instructional programs, including orientation, workshops, and course lectures, designed to teach information management skills.

Other library facilities include the various departmental and school libraries and the general University Library. The Walter Royal Davis Library houses the general collection. The Robert B. House Undergraduate Library and the Louis Round Wilson Library were recently renovated to house the special collections, also available to graduate students.

UNC-CH News Services/ A. Hawthorne

University Career Services

University Career Services assists students who have, for the most part, identified their career direction.

Services for upperclassmen and graduate students include workshops on resume-writing, interviewing, and job-seeking skills; resume-referral to employers; individual counseling; on-campus interviewing; job vacancy notebooks; and a credentials file for students in selected curricula. Some services are limited to students in a UNC-CH degree or certification program who are within two semesters of graduation.

Additional resources and programs include occupational and employer information, career panels, career and graduate/professional school fairs, an automated job hot-line and an alumni network service.

University Career Planning and Placement Services is located at 211 Hanes Hall. Office hours are 8 a.m. – 5 p.m. Resource Room hours are 8 a.m. – 8 p.m., Mon.–Thurs.

School of Public Health

Mission Statement

The mission of the School of Public Health is to improve the health and well-being of the population. This mission is accomplished through the interaction of:

- Teaching – to educate students to assume and to continue professional and leadership roles in public health practice, policy, research and teaching.
- Research (basic and applied) – to advance knowledge and understanding of the biological, social, behavioral, environmental and economic factors affecting the health status of the population.
- Service and Professional Practice – to provide broad-based technical assistance and consultation on public health issues in the public and private sectors at local, state, national and international levels.

General Information

The School of Public Health was organized in 1936 as a division within the School of Medicine at The University of North Carolina. Separate status as a school of public health was granted in 1939 and the first graduate degrees were awarded in 1940. The fourth school of public health in the nation, the UNC School of Public Health was the first such school established within a state university.

It is today, with the Schools of Medicine, Dentistry, Nursing and Pharmacy, a unit of the Division of Health Affairs. The original departments of the School were Epidemiology, Parasitology (changed in 1968 to Parasitology and Laboratory Practice, merged with Epidemiology in 1991), Public Health Administration (changed to Health Administration in 1969 and to Health Policy and Administration in 1982), and Sanitary Engineering (changed in 1962 to Environmental Sciences and Engineering). Four additional departments (Biostatistics, Health Behavior and Health Education, Maternal and Child Health, Nutrition) and one curriculum (Public Health Nursing) are currently operating. Unique in the United States, the Nutrition Department is now located in both the School of Public Health and the School of Medicine. All departments and curricula participate in research in a variety of areas and in field service to the state, region and the nation.

In addition to the departments and curriculum, two divisions operate within the School. The Division of External Affairs and Community Health Service extends the service capabilities and promotes the School's commitment to community service as its public responsibility. The Division of Computing and Information Services serves the computing and information management needs of faculty, staff and students in administration, education and research.

The School of Public Health is one of 25 such schools in the United States accredited by the Council on Education for Public Health. The Curriculum of Public Health Nursing is accredited by the National League for Nursing, the programs in air and industrial hygiene and water resources engineering in the Department of Environmental Sciences and Engineering by the Accreditation Board for Engineering and Technology, Inc. and the Department of Health Policy and Administration by the Accrediting Commission on Education for Health Services Administration.

Degrees offered by the School of Public Health include an undergraduate degree (BSPH); the graduate academic degrees of Master of Science (MS) and Doctor of Philosophy (PhD); and the graduate professional degrees of Master of Public Health (MPH), Master of Science in Public Health (MSPH), Master of Healthcare Administration (MHA), Master of Science in

Dean's Office

Michel A. Ibrahim, M.D., M.P.H., Ph.D.
Dean

Richard M. House, B.S., M.P.H., Ed.D.
Associate Dean for External Affairs and Community Health Service

Mary Peoples-Sheps, B.S.N., M.S., Dr.P.H.
Associate Dean for Public Health Practice

Ernest Schoenfeld, A.A.S., B.S., M.P.H., Dr.P.H.
Associate Dean for Administration

Allan Steckler, B.S., M.P.H., Dr.P.H.
Associate Dean for Academic Programs

Harriet H. Barr, B.A., M.P.H.
Assistant Dean/Office of Alumni Affairs Director

Gail C. Gibbs
Assistant to the Dean

Gary R. Lloyd, B.S.
Office of Student Services Director

Charles Rasberry, B.A., M.Div.
Office of Development Director

William T. Small, B.S., M.S.P.H.
Assistant Dean of Students

Administrative Board

Paul Hardin, J.D.
Chancellor, ex officio

Michel A. Ibrahim, M.D., M.P.H., Ph.D.
Dean, ex officio

James D. Beck, A.B., M.S., Ph.D.
Professor and Chair, Department of Dental Ecology, School of Dentistry

Francis A. DiGiano, B.S.C.E., M.S.C.E., Ph.D.
Professor of Water Resources Engineering, Department of Environmental Sciences and Engineering

Janice Dodds, B.S., M.Ed., Ed.D.
Associate Professor of Maternal and Child Health and Nutrition

JoAnne L. Earp, B.A., Sc.D.
Professor of Health Behavior and Health Education

Patricia Fischer, B.A., M.A., Dr.P.H.
Associate Professor of Health Policy and Administration

Bonnie Friedman, R.N., Ph.D.
Acting Chair, Department of Community and Health, School of Nursing

John W. Hatch, B.A., M.S.W., Dr.P.H.
Professor of Health Behavior and Health Education

Parker C. Reist, B.S., S.M., S.M., Sc.D.
Professor of Air and Industrial Hygiene, Department of Environmental Sciences and Engineering

Ernest Schoenfeld, A.A.S., B.S., M.P.H., Dr.P.H.
Associate Dean, ex officio

Hugh H. Tilson, M.D., M.P.H., Dr.P.H.
Adjunct Professor of Epidemiology/Health Policy and Administration

Environmental Engineering (MSEE) and Doctor of Public Health (DrPH). All requirements for the graduate professional degrees are administered by the faculty of the School of Public Health with the approval of the Administrative Board of the Graduate School.

Close affiliations are maintained with other graduate schools and departments of the University of North Carolina campuses, as well as with other schools and universities, health and human services agencies and research organizations. These affiliations are local, statewide, national and international in scope. The nature of the affiliations includes joint sponsorship and effort in teaching and research programs, joint faculty appointments and establishment of field training centers for students in a number of official and voluntary international, federal, state and local health and human service organizations.

The School of Public Health has an active recruitment program for minorities. Students in the School of Public Health have the same rights and privileges accorded all students at The University of North Carolina at Chapel Hill. They may take courses in other departments of the University, North Carolina State University and Duke University provided they are properly qualified and have the approval of their faculty advisors. Certain courses in chemistry, biochemistry, microbiology, economics, education, political sciences, social work, sociology, anthropology and statistics have an especially close relationship to public health.

The School of Public Health admits only those students who would be expected to profit most by the educational program offered. It reserves the right to limit the number of students admitted to any course and drop from the roll any student whose work is unsatisfactory for any reason. It will be assumed that all applicants have assented to these conditions.

Academic Information

Degrees Offered

The School of Public Health offers one undergraduate degree, Bachelor of Science in Public Health, and seven graduate degrees: Master of Public Health, Master of Science in Public Health, Master of Healthcare Administration, Master of Science, Master of Science in Environmental Engineering, Doctor of Philosophy, and Doctor of Public Health. Degrees are awarded in May, August and December, although formal commencement exercises are held in May and December. Any student who desires to proceed in a doctoral program must be recommended to the Graduate School by his/her major department.

The general description of requirements for each degree follows. Explanation of the various programs of study in the different areas of specialization is found under the heading of each department in a later section in the catalog. Courses and programs described in this catalog have been approved by the University faculty and administration as of March 1, 1993. For full current information, contact the department or curriculum involved, or contact Gary Lloyd, student services director at the School, at (919) 966-2499.

Bachelor of Science in Public Health

The undergraduate degree programs of the School of Public Health lead to a Bachelor of Science in Public Health (BSPH) degree. Students wishing to obtain the BSPH degree typically spend two years in the General College of the University of North Carolina at Chapel Hill (or in equivalent academic study elsewhere) and two subsequent years under the administration of the School of Public Health. A few persons with a prior bachelor's degree may also be admitted each year to study for the BSPH degree. Interested persons may obtain admission applications and additional information from the Director of

Student Services, CB# 7400, 138 Rosenau Hall, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-7400, or by calling (919) 966-6331.

Since enrollment in the BSPH degree programs is limited, completion of the prescribed freshman-sophomore prerequisites does not assure the student a position in the School of Public Health in the junior or a later academic year. Student selections are made, typically in the latter half of the sophomore year of coursework, on a competitive basis with consideration of academic achievement and personal qualifications.

The undergraduate public health degree programs combine features of a broad-based education with study in the professional area of public health. These programs seek to prepare individuals for professional positions in health and related fields, to provide a firm base for later graduate study, and to provide for general enrichment of the future lives of the students.

There are five BSPH degree program majors: Biostatistics, Environmental Sciences and Policy, Health Behavior and Health Education, Health Policy and Administration, and Nutrition.

The Biostatistics major gives students preparation in application of quantitative knowledge to a variety of health and related matters dealing with the physical environment; the population; patterns of disease, disability and death; and the costs and effects of health services. Coursework in mathematics is a prerequisite for this major.

The undergraduate Environmental Science and Policy major is directed towards developing an understanding of: (1) the physical principles governing behavior of the environment, such as the production, transport and fate of materials in the air, water, oceans, ecological systems, etc.; (2) the historical development of society's response to environmental problems; (3) the scientific/social/political/economic factors involved in the generation, conception and solution of environmental problems; and (4) the various viewpoints that might be adopted in analyzing the acceptability of proposed solutions. These goals require the student to gain a broad background in the sciences and mathematics, as well as specialized knowledge from the social sciences. In particular, emphasis is placed on the principles of chemistry, biology, physics and mathematics as they apply to the behavior of environmental systems. Additional coursework is taken in the more specialized fields of environmental science, ecology, marine sciences and policy analysis.

The undergraduate Health Behavior and Health Education major is concerned with ways to help people of diverse backgrounds improve their well-being in the most healthful way. Special attention is given to the role of community organization. Courses in psychology, anthropology and sociology are desirable prerequisites for this major. This coursework in the program includes an extended period of field training in which students may help plan, conduct and evaluate educational programs for professional and lay groups in a variety of settings.

The undergraduate major in Health Policy and Administration prepares students to: (1) assume positions requiring basic administrative operational skills in such areas as financial management, supervision, planning and general administration and (2) pursue graduate study in a variety of fields, including health, business and public administration, law, social work and medicine. Basic economics and accounting courses are prerequisites for this major. Summer field placements for the students may be in a hospital, nursing home, public health department or other similar organization.

The Nutrition undergraduate major emphasizes the relationship between nutrition and health. This program is designed to meet the educational objectives of students with at least two alternative career goals; (1) entry level positions in community nutrition and dietetics, and (2) preprofessional study for careers in medicine, dentistry and other health fields. Basic courses in biology and chemistry are prerequisites for admission.
Requirements for the BSPH degree are as follows:

1. At least 120 semester hours of courses, not counting physical education activities courses. A 2.0 (C) average on all work attempted at The University of North Carolina at Chapel

Dean's Cabinet

Michel A. Ibrahim, M.D., M.P.H., Ph.D.
Dean of the School of Public Health and Professor of Epidemiology

Richard M. House, B.S., M.P.H., Ed.D.
Associate Dean for External Affairs and Community Health Service and Clinical Associate Professor of Health Behavior and Health Education

Mary Peoples-Sheps, B.S.N., M.S., Dr.P.H.
Associate Dean for Public Health Practice and Associate Professor of Maternal and Child Health/ Public Health Nursing

Ernest Schoenfeld, A.A.S., B.S., M.P.H., Dr.P.H.
Associate Dean for Administration

Allan B. Steckler, B.S., M.P.H., Dr.P.H.
Associate Dean for Academic Programs and Professor of Health Behavior and Health Education

William H. Glaze, B.S., M.S., Ph.D.
Chair and Professor of Environmental Sciences and Engineering

Barbara S. Hulka, B.A., M.S., M.D., M.P.H.
Chair and Kenan Professor of Epidemiology

Kerry E. Kilpatrick, B.S.E., M.B.A., M.S., Ph.D.
Chair and Professor of Health Policy and Administration

Milton E. Kotelchuck, B.A., M.A., M.P.H., Ph.D.
Chair and Associate Professor of Maternal and Child Health

Barry H. Margolin, B.S., M.A., Ph.D.
Chair and Professor of Biostatistics

James R. Sorenson, B.A., M.A., Ph.D.
Chair and Professor of Health Behavior and Health Education

Rachel Stevens, B.S.N., M.S.N., Ed.D.
Chair and Clinical Associate Professor of Public Health Nursing

Steven Zeisel, B.S., M.D., Ph.D.
Chair and Professor of Nutrition

Representatives of the Student Union

Hill. The last 30 hours of degree credit taken in residence in Chapel Hill.

2. A freshman-sophomore load of approximately 60 semester hours of courses, which must include:
   a. English 11, 12 or 13.
   b. Coursework through Foreign Language 3 (or placement credit in Foreign Language 4), with no graduation credit given for Foreign Language 1 of the high school foreign language.
   c. Two courses from the Mathematical Sciences option of the General College of the University.
   d. Biology 11, 11L and an additional acceptable Natural Sciences Perspective course.
   e. Two acceptable Social Sciences Perspective courses (from two different departments).
   f. Two acceptable Aesthetic Perspective courses (one in literature and one in fine arts).
   g. One acceptable Philosophical Perspective course.
   h. Two acceptable Western Historical/Non-Western/Comparative Perspective courses, including one covering a period of Western History before 1700.
   i. Two physical education activities courses.
3. A junior-senior total of approximately 60 semester hours to include Biostatistics 101 (or 110), Environmental Sciences and Engineering 51, Epidemiology 160 and a minimum of three electives outside the School of Public Health.
4. A satisfactory major in one of the five fields of concentration. For additional information and specific requirements for each area of concentration see *The Undergraduate Bulletin* of the University.

Note: To be considered for admission a student should present these minimum high school course requirements (including 9th grade):
- four units of English;
- at least three units of college preparatory mathematics (two algebra and one geometry or a higher level mathematics course for which algebra II is a prerequisite);
- at least two units of a single foreign language;
- three units in science, including at least one unit in a life of biological science and at least one unit in a physical science, and including at least one laboratory course;
- two units of social science including United States history;
- and enough elective units in traditional academic areas (literature, mathematics, physical and biological science, social sciences and foreign languages) for a total of 16 units.

Admitted students will take placement exams in math and foreign language; therefore, it is preferred that students continue in advanced levels of math and foreign language courses during their final year in high school even if they have already met the minimum requirements in these fields.

Master of Public Health

The program is designed to prepare students for positions which require a considerable breadth of knowledge of the whole field of public health but a lesser degree of specialization in one area. Thus students in this program may take nearly half of their courses outside the major department or curriculum and will undergo extensive field training if previous experience is not deemed sufficient by criteria set by the student's department or curriculum. Typically, Master of Public Health students will have already acquired education in a health or health-related profession or have at least three years of experience in a field germane to public health.

The Master of Public Health degree is predominantly a terminal degree, but qualified students may proceed in the School of Public Health to a DrPH program for advanced study and further qualification.

Fields of Specialization

Programs of study leading to the Master of Public Health degree are offered by all departments and curriculum in the School. Detailed descriptions are found in the sections describing the program areas in this catalog.

Requirements for Admission

1. One or more of the following:
   a. A prior doctoral degree (such as MD, DVM, DDS, JD or equivalent) from approved schools. Other doctoral degrees from approved schools may also qualify the applicant, depending upon the department to which application is being made and the relevance of the background to the department's field; or
   b. A prior master's degree (professional or academic) from approved schools provided the prior training is relevant to the basic field of the department or curriculum to which the student is applying as determined by the policies of that department or curriculum; or
   c. A bachelor's degree from approved schools, including a strong undergraduate record overall, with an average grade of B or better in the subject of the major. The course content should meet the policies of the department or curriculum to which the student is applying. Standardized tests such as the GRE are required of applicants.
2. In most departments or curriculum, the applicant must have had relevant experience in a health-related agency or organization prior to matriculation. Established policy may credit experience prior to admission by reducing the length of the program or permitting a waiver for field training. The extent and nature of required field training is also subject to established policy of the program area.
3. Special additional requirements by departments or curriculum, as specified.

Requirements for the Degree

1. **Residence:** At least two semesters are required, but a more extended period for majors in various programs may be needed. For those students in joint programs with selected other professional schools on this campus, which have been approved by the Graduate School, credit toward one semester of residence may be obtained by enrolling in and receiving credit for at least 15 semester hours (usually five courses) in the School of Public Health while registered in the other school. Students attempting to obtain the MPH degree simultaneously with another graduate school degree must register full time in the School of Public Health for at least one semester.
2. **Course Requirements:** Candidates for the MPH degree shall meet each of the following three sets of course requirements; any course which partially satisfies two requirements may simultaneously be used for both.
   a. Depth: Each candidate shall successfully complete a major in one of the departments or curriculum of the School, by satisfying whatever requirements that department or curriculum may set.
   b. Breadth: Each candidate shall successfully complete at least four health-related courses in at least three different departments or curriculum other than the major. No portion of this requirement may be waived.
   c. Specifics: Each candidate shall successfully complete (1) at least one course in the Department of Biostatistics, (2) at least one course in the Department of Epidemiology, (3) a basic course covering the physical, biological and/or social/ behavioral factors which affect the health of the community, and (4) at least one course relevant to health services delivery systems. Any of these courses may be waived on the basis of a suitable display of proficiency, as approved by the candidate's advisor and the instructor of the course concerned.
3. **Admission to Candidacy:** An application for admission to candidacy which includes the total course program and title of written report (see below) must be filed with the Graduate School about three months before the expected date of graduation. The

specific deadline is given in the calendar of events in this catalog.

4. **Substitutes for the Master's Thesis:** Candidates for the MPH, MSPH and MSEE degrees who do not write a Master's Thesis must write a Master's Paper as a substitute. The School of Public Health has specified the following guidelines for this substitute.
   a. The Master's Paper should show some synthesis of knowledge and advance or contribute to the (appropriate specialized area of the) field of Public Health.
   b. In connection with the Master's Paper, each candidate will register for at least one hour of credit in XXXX 392 (where XXXX is the department or curriculum acronym), or some other course approved for this purpose by the School.
   c. Each Master's Paper must be approved by at least two members of the Graduate Faculty. The candidate will submit the paper to the department or curriculum, including a title page showing the approving signatures, in accordance with the University calendar.
   d. Approved Master's Papers will be kept at least five years in a public file (usually in the departmental library or reading room).
5. **Supervised Field Training:** Training lasting six to 12 weeks or a practicum within the department or curriculum must be completed. Policy of the program may permit this requirement to be waived on grounds that:
   a. the student has had adequate prior supervised experience in the application of the methodology of his specialty, and
   b. the student has substituted a satisfactory learning experience which clearly serves his or her educational goals better than field training or a practicum would.
6. **Final Written or Oral Examination:** The examination must be taken at least one month before the degree is expected. The specific deadline is given in the calendar of events in this catalog. The focus is on work taken in the major department or curriculum, but, depending on the program policy, it may extend to other scientific and professional areas in which a department or curriculum would expect its students to be knowledgeable.
7. **Time Limitation:** All requirements of the degree must be completed within five years from the time the student first matriculated in the program.

Master of Science in Public Health

The Master of Science in Public Health program is designed to prepare students for professional careers in specialized areas of public health. Thus, its students will take courses mainly in one major department or curriculum of the School of Public Health, although there are also core requirements which provide for orientation to a broader view of public health. The Master of Science in Public Health degree is usually terminal, but it and the Master of Science degree, more than the Master of Public Health, tend to be the precursor to a doctoral program.

Fields of Specialization

Programs of study leading to the Master of Science in Public Health degree are offered by the following departments: Environmental Sciences and Engineering, Epidemiology, Health Behavior and Health Education, Health Policy and Administration, and Maternal and Child Health. Descriptions of these programs are found in the sections describing the departments in this catalog.

Requirements for Admission

1. A bachelor's degree from an approved school in a program that included course content as prescribed by approved policies of the department to which the student is applying.
2. A strong undergraduate record overall, with an average grade of B or better in the subject of the major. Some departments require specific tests such as the GRE of all applicants.

Applicants with less than a B average in the subject of the major must take the GRE test.

3. Special additional and/or more stringent requirements by departments, as specified.

Requirements for the Degree

1. **Residence:** A minimum period of residence of not less than two semesters is required. However, most students will need more time to satisfy the course requirements in specific programs. Students attempting to obtain the MSPH simultaneously with another Graduate School degree must register full time in the School of Public Health for one semester.
2. **Course Program:**
   a. Within the minimum of 30 semester hours needed for graduation in each department, each candidate shall successfully complete:
      (1) at least one course in the Department of Biostatistics,
      (2) at least one course in the Department of Epidemiology,
      (3) a basic course covering the physical, biological and/or social/behavioral factors which affect the health of the community. Any of these courses may be waived on the basis of a suitable display of proficiency, as approved by the candidate's advisor and the instructor of the course concerned.
   b. In addition, each candidate shall complete at least 15 semester hours in the specialized field as specified by the department.
3. **Admission to Candidacy:** An application for admission to candidacy which includes the total course program and title of written report (see below) must be filed with the Graduate School about three months before the expected date of graduation. The specific deadlines are given in the calendar of events in this catalog.
4. **Substitutes for the Master's Thesis:** Candidates for the MPH, MSPH and MSEE degrees who do not write a Master's Thesis must write a Master's Paper as a substitute. The School of Public Health has specified the following guidelines for this substitute.
   a. The Master's Paper should show some synthesis of knowledge, and advance or contribute to the (appropriate specialized area of the) field of Public Health.
   b. In connection with the Master's Paper, each candidate will register for at least one hour of credit in XXXX 392 (where XXXX is the department acronym) or some other course approved for this purpose by the School.
   c. Each Master's Paper must be approved by at least two members of the Graduate Faculty. The candidate will submit the paper to the department, including a title page showing the approving signatures, in accordance with the University calendar.
   d. Approved Master's Papers will be kept at least five years in a public file (usually in the Departmental Library or Reading Room).
5. **Final Written or Oral Examination:** The examination must be taken at least one month before the degree is expected. The specific deadline is given in the calendar of events in this catalog. The focus is on work taken in the major department, but, depending upon departmental policy, it may extend to other scientific and professional areas in which a department would expect its students to be knowledgeable.

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6. **Time Limitation:** All requirements of the degree must be completed within five years from the time the student first matriculated in the program.

Master of Healthcare Administration

The Master of Healthcare Administration program, Department of Health Policy and Administration, is designed to prepare students for management careers in healthcare organizations. Graduates will be prepared to take positions in staff or line management or as consultants in hospitals, health maintenance organizations, clinics, public health departments and other health-care settings.

Requirements for Admission

1. A bachelor's degree from an approved school. Preparation in microeconomics, college-level mathematics and financial accounting, although not formally required for admission, is strongly advised.
2. A strong undergraduate record overall, with an average grade of B or better in the subject of the major. Applicants are required to take either the GRE or the GMAT.

Requirements for the Degree

1. **Residence:** A minimum period of residence of not less than two semesters is required. However, most students typically need four semesters to satisfy the course requirements for this program.
2. **Course Program:**
   a. The program requires a minimum of 51 semester hours of courses plus field training. Each candidate shall successfully complete:
      (1) at least one course in the Department of Biostatistics,
      (2) at least one course in the Department of Epidemiology.
   b. In addition, each candidate shall complete the department degree core and specialty concentration requirements.
3. **Admission to Candidacy:** An application for admission to candidacy, which includes the total course program and other necessary documentation, must be filed with the Graduate School about three months before the expected date of graduation. The specific deadlines are given in the calendar of events in this catalog.
4. **Substitutes for the Master's Thesis:** Candidates for the MHA degree do not write a Master's Thesis; details on an approved substitute are available from the department.
5. **Final Written or Oral Examination:** The examination or approved substitute must be taken at least one month before the degree is expected. The specific deadline is given in the calendar of events in this catalog. The focus is on work taken in the department, but it may extend to other scientific and professional areas in which the department would expect its students to be knowledgeable.
6. **Time Limitation:** All requirements of the degree must be completed within five years from the time the student first matriculated in the program.

Master of Science

Programs of study leading to this degree are offered in the Departments of Biostatistics, Environmental Sciences and Engineering and the Curriculum in Public Health Nursing.

For guidelines on this degree program, the reader should refer to sections on the relevant departments and curriculum, brochures produced by these programs and the catalog of the Graduate School.

Master of Science in Environmental Engineering

The curriculum leading to this degree is designed to prepare graduates for careers in the environmental engineering profession, with special emphasis on water resources and air and industrial hygiene. Specifically, those awarded this degree are prepared for professional work with private firms of consulting engineers; with public agencies at the national, state, regional and local levels of government and with a variety of industrial organizations.

Requirements for Admission

Candidates for this degree must hold an engineering degree from an institution accredited by the Accreditation Board for Engineering and Technology, Inc. or from an equivalent foreign institution — preferably in civil, environmental or sanitary, chemical or mechanical engineering — where the curriculum has involved fundamental work in chemistry, physics, mathematics and the engineering sciences.

Requirements for the Degree

1. **Residence:** A minimum of one calendar year (12 months) of residence for students who have graduated with a strong record from approved engineering schools.
2. **Course Program:** Upon admission, students are required to develop a program of courses in consultation with their academic advisors. The program must include sufficient breadth to satisfy minimum course requirements described elsewhere in this catalog. For all students, a minimum of 30 graduate credits is required.
3. **Admission to Candidacy:** Students must file an application with the Graduate School for admission to candidacy about three months before the expected date of graduation. The specific deadlines are given in the calendar of events in this catalog.
4. **Substitutes for the Master's Thesis:** Candidates for the MPH, MSPH and MSEE degrees who do not write a Master's Thesis must write a Master's Paper as a substitute. The School of Public Health has specified the following guidelines for this substitute.
   a. The Master's Paper should show some synthesis of knowledge and advance or contribute to the (appropriate specialized area of the) field of Public Health.
   b. In connection with the Master's Paper, each candidate will register for at least three hours of credit in XXXX 392 (where XXXX is the department acronym) or some other course approved for this purpose by the School.
   c. Each Master's Paper must be approved by at least two members of the Graduate Faculty. The candidate will submit the paper to the department, including a title page showing the approving signatures, in accordance with the University calendar.
   d. Approved Master's Papers will be kept at least five years in a public file (usually in the departmental library or reading room).
5. **Final Oral Examination:** About one month before the expected date of graduation, students are given a final oral examination which focuses on their program of study, including the written report. Deadlines are announced in the Department of Environmental Sciences and Engineering.
6. **Time Limitation:** All requirements for the degree must be completed within five years of the time the student matriculated in the program.

Doctor of Public Health

The Doctor of Public Health (DrPH) program provides professional training to prepare persons for the effective conduct or supervision of research, usually of an applied nature, and the integration of new knowledge and techniques into community and/or public health practice. Graduates are typically employed by operating community or public health programs at the local, state, national or international levels.

Fields of Specialization

Programs leading to the Doctor of Public Health degree are offered by the Departments of Biostatistics, Epidemiology, Health Behavior and Health Education, Health Policy and Administration, Maternal and Child Health, and Nutrition.

Requirements for Admission

A prior master's or doctoral degree in public health or a related field is generally required. However, students in MPH or MSPH programs at the School may be admitted to the DrPH program without formally acquiring the master's degree, provided they satisfy all course requirements for the MPH degree.

At least 12 months of significant experience in public health is also required, but this may be included as part of the DrPH program before formal admission to candidacy.

Requirements for the Degree

1. **Time:** A minimum of two academic years of coursework and directed research, including at least two semesters of full-time continuous residence is required. This must be in addition to any time needed for satisfying the requirements for admission to the program. Students attempting to obtain the DrPH degree simultaneously with another Graduate School degree must register full time in the School of Public Health at least two semesters.
2. **Course Program:** A minimum of 18 semester hours of coursework beyond the master's degree over and above MPH core courses are required for admission to candidacy and dissertation and research courses. The specific courses to be taken and number of credits will depend upon the qualifications and field of interest of the individual students. However, inasmuch as acquisition of this degree requires broad knowledge, students will of necessity take courses outside of their own department from within the School of Public Health, other parts of the University or in other universities.
3. **Doctoral Committee:** Individual departments may, at the early stage of the program, establish a group of course advisors to direct and supervise the student's coursework. The group may later become the dissertation committee. The doctoral student should play a significant role in selecting members of the committee.

   The dissertation committee shall consist of no fewer than five members, one of whom shall be named chair, and at least three of whom shall be full members of the Graduate Faculty. Others may be limited members of the Graduate Faculty or "special appointees" approved by the Graduate School. Committee members shall be nominated by the director of the departmental doctoral program using the "Recommendation for Composition of Doctoral Dissertation Committee" form which must be transmitted to the Graduate School for approval. This committee will examine and approve the dissertation prospectus, either as part of the first doctoral oral examination or subsequent to it; consult with the student throughout the progress of the research; and participate in the final oral examination.

   Doctoral committees and students are encouraged to include scholars from outside the program to serve as members of doctoral committees. The outside members may be selected from faculty from other departments of the University or other institutions where scholarly work is conducted.

   Each doctoral student is expected to consult with members of the dissertation committee at frequent intervals throughout the progress of his or her research and submit a progress report to each member of the committee at least once a year.
4. **Examinations:** When students have completed their coursework or are in the final stage of their course programs and have satisfied other conditions for admission to candidacy, they are eligible to take the comprehensive doctoral examination. This consists of an oral and a written examination, both conducted by a committee which may or may not be the same as the dissertation committee. The interval between the two examinations should be short. The examinations are taken in the order determined by the committee

and should cover all work in the student's major and minor fields of study. In addition to testing the student's knowledge, the committee may at the time of the oral examination determine the appropriateness and feasibility of the dissertation topic or hold additional examinations for this purpose at a later date.

The oral examination to examine and approve the dissertation prospectus must be conducted by at least five members of the dissertation committee, at least three of whom shall be full members of the Graduate Faculty.

If the student fails either examination he or she may not take the examination a second time until at least three months have elapsed. A student who fails either examination twice becomes ineligible to continue graduate study.

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5. **Admission to Candidacy:** Prior to admission to candidacy, students must have:
   a. Completed the 18 semester hours of coursework required for the doctoral program as described above;
   b. Passed both oral and written parts of the comprehensive examination; and
   c. Acquired the MPH or satisfied the School's MPH core course requirements which applied either at time of admission to the program or at the time of admission to candidacy. If students seek exemptions for any course requirements for the MPH on the grounds of equivalency of other courses taken, equivalency will be determined by the departments in the School that teach those particular courses.
6. **Research:** Each candidate is required to submit a dissertation reflecting research of such scope, originality and skill in presentation as to indicate that the student has a command of the subject and has demonstrated an ability to contribute fresh knowledge or perspectives on the subject. In addition, the dissertation should demonstrate mastery of the research methodology of the discipline.
7. **Application for Degree:** When candidates approach completion of their research and can anticipate final approval of their dissertations they should apply for a degree on a particular graduation date. In the event that the degree is not received in that graduation, the student must file a new application for degree. Applications must be filed about three months before the time scheduled for the candidate's graduation in accordance with the deadline given in the calendar of events in this catalog.
8. **Final Oral Examination:** The final oral examination should be primarily a defense of the dissertation and be conducted by the appointed dissertation committee. The examination should be open to the public.

   This examination shall be held only after all members of the dissertation committee have had adequate opportunity to review a draft of the dissertation, which the candidate is prepared to submit for final typing. The dissertation advisor is responsible to the members of the committee for determining that the draft is an appropriate form for their evaluation. The committee may, at the time of the final oral, require alterations and corrections. The dissertation advisor is also responsible for verifying that the changes required by the committee have been made but may delegate this responsibility to those committee members who imposed the requirements. When these requirements have been

met, the Report of the Final Oral Examination is submitted to the Graduate School, and the dissertation in final typed form, designed to meet the standards as defined in "A Guide to the Preparation of Theses and Dissertations," is registered with the Graduate School.

9. **Time Limitation:** All requirements for the degree must be completed within eight years of the time the student matriculated as a graduate student at this institution. If a student leaves the University at the completion of a master's program and returns later for the DrPH, he or she will be permitted eight years after admission as a doctoral student for completion of requirements. If the program is interrupted, the student has the option of satisfying the requirements that were in effect either at the time of matriculation or during the final year of work.
10. **Leave of Absence:** A doctoral student may request and receive a leave of absence from graduate study for a definite stated time. Written requests are to be presented through the School's Associate Dean for Academic Programs to the Graduate School explaining the reasons for the leave. The request must be accompanied by a written approval from the department chair or director of the doctoral program and endorsed by the Associate Dean for Academic Programs. If the Graduate School approves the leave of absence, the time of that leave will not count against total time allowed for the degree.

Doctor of Philosophy

The Doctor of Philosophy degree prepares persons for leadership in academic and related settings involving teaching and research with emphasis on basic or theoretical issues. Graduates are typically employed by universities or other organizations conducting research.

This degree is offered in the Departments of Biostatistics, Environmental Sciences and Engineering, Epidemiology, Health Behavior and Health Education, Health Policy and Administration, and Nutrition. For details consult each departmental section in this catalog and *The Graduate School Catalog*.

The precursor to the PhD degree is typically the MSPH degree if the research is oriented to public health, or the MS degree if the research is not so oriented.

Joint Degree Programs

Joint degree programs are offered in certain departments of the School of Public Health in conjunction with the Schools of Medicine, Dentistry, Law and Social Work. Medical students can select the joint degree option through the Departments of Epidemiology, Health Policy and Administration, and Maternal and Child Health. Dental and law students enroll in the Department of Health Policy and Administration. The joint degree with the School of Social Work is through the Department of Maternal and Child Health.

Under the joint degree arrangement, a student may be able to earn two professional degrees in a period of time less than the total required by the two degrees separately. Information on joint degree programs is available from the department in which the student is interested in enrolling.

Grades

Grades used in the evaluation of the performance of graduate students are as follows:

H Clear Excellence

P Entirely Satisfactory

L Low Passing

F Failed

S Satisfactory

No work falling below the standard represented by the grade L is counted for graduate credit. If, in the judgment of the Administrative Board, the quality of work of any student falls below the standard expected of graduate students, the registration of such student will be canceled. A graduate student becomes academically ineligible to continue in the Graduate School if he or she receives any grade of F or receives nine or more hours of L.

If a student either completes or withdraws from one graduate program and begins study in another graduate program, those courses to be credited toward the new program will form the basis for academic eligibility.

Additional information on academic regulations are published in *The Graduate School Catalog* which can be obtained from the Graduate School Office, Bynum Hall, CB# 4010.

UNC-CH News Services/ Dan Sears

Honor Societies

Delta Omega

Election to the Theta Chapter of Delta Omega, public health's national honor society, occurs shortly before graduation and is based upon academic achievement and leadership potential.

Sigma Theta Tau

Election to the Alpha Alpha Chapter of Sigma Theta Tau (national honor society of nursing) occurs shortly before graduation for nursing students in the School of Public Health.

Financial Assistance

Minority Presence Grant Program

Under the Board of Governors general Minority Presence Grant Program, black students may be eligible for special financial assistance if they are residents of North Carolina, enrolled for at least three hours of degree-credit coursework and demonstrate financial need.

The Minority Presence Grant Program for Doctoral Study provides stipends of up to $9,000 for the academic year, with an option of additional support for study in the summer session, for black residents of North Carolina who are selected to participate. Recipients must be full-time students pursuing doctoral degrees at The University of North Carolina at Chapel Hill.

Patricia Roberts Harris Fellowships

The Patricia Roberts Harris (PRH) Fellowship Program is a federal program administered by the Department of Education that provides fellowships for the purpose of increasing the representation of minorities and women in graduate and professional education. In the School of Public Health, the Departments of Biostatistics, Environmental Sciences and Engineering, and Epidemiology participate in this program. The PRH fellowship provides a stipend of up to $10,000 for 12 months, plus tuition and fees. Continuation of the PRH Fellowship Program is contingent upon funding from the U.S. Department of Education.

Traineeships, Assistantships and Loans

A limited number of federally sponsored "non-service" traineeships and fellowships are expected to be available to properly qualified candidates. Traineeships or fellowships will not be awarded until the student has been admitted to the School. Graduate assistantships are "service" appointments and some require a reduced load of academic work. Persons desiring consideration for service or non-service awards should so indicate by checking the appropriate box on the application for admission form.

Other work opportunities and some student loan funds are available from the University Student Aid Office. Application should be made to: Director, Office of Student Aid, CB# 2300, 300 Vance Building, Chapel Hill, North Carolina 27599-2300.

Scholarships and Fellowships

Alumni and faculty have established a number of scholarships and fellowships in the School of Public Health. With the exception of the Cole scholarships (two per year), the

scholarships are available only to students in the department or curriculum in which the scholarship is established.

Cole Scholarships are open to all applicants to the School of Public Health. They are awarded upon the recipients' enrollment in the School.

The departments and curriculum and scholarships in each follow:

Environmental Sciences and Engineering
Richard Hazen Fellowship Fund
Charles and Shirley F. Weiss Endowment
Herman G. Baity Bicentennial Fellowship
David Allison Fraser Scholarship
Emit T. Chanlett Fund
Daniel T. Okun Fund

Health Behavior and Health Education
Lucy S. Morgan Fellowship

Nutrition
MaryAnn Farthing Scholarship

Public Health Nursing
Blee - Hay Scholarship

The criteria for selecting the recipients are available from the departments or curriculum in which the scholarship is established. These awards are made and the recipients recognized at appropriate occasions each year.

Student Union

All members of the School of Public Health student body are members of the Student Union. Its offices are made up of departmental representatives and a central Union Board which represents the entire student body. The Assistant Dean of Students serves as a liaison representative. The purposes of the Student Union are: (1) to enhance and ensure the opportunity of each student to receive an education of the highest attainable quality; (2) to represent and advocate causes and interests of the student body; (3) to stimulate interest in and encourage activities which relate to health in its broadest sense; and (4) to function as a channel of communication between the student body and the faculty.

Microcomputer Laboratory

The microcomputer laboratory is an educational facility operated jointly by the School of Public Health's Division of Computing and Information Services and the University's Microcomputing Support Center. It is available for general student use.

The lab has 22 Zenith 386 SX PCs, 10 Zenith 20MHz 386 PCs and eight Macintosh LC machines. Each PC has three megabytes of RAM (four for the 10 full 386 machines), a 20 megabyte hard disk, a 3 1/2-inch floppy disk, a math co-processor, a mouse and a color VGA monitor. The Macintoshes have one floppy drive, two or more megabytes of RAM, a

40-megabyte hard disk and a color screen. All machines are Novell networked, including the Macintoshes. In addition, the machines connect to the campus broadband network and the School's VAX-based system for electronic mail.

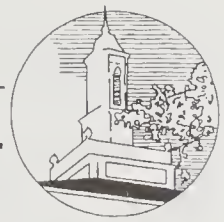
A variety of software is maintained for the MS-DOS machines including Windows, Microsoft Word (Windows and DOS versions), WordPerfect, dBASE IV, VP-Planner and Lotus, Excel, Systat and PC-SAS. A variety of communications software permits access to mainframe and supercomputers on campus and elsewhere via the Internet; access to the School's electronic mail service and access to UNCLE and MEDLINE implementation. Software for the Macintoshes includes Microsoft Works, Microsoft Word, Excel, Superpaint and communications software. MacPaint, MacDraw, MacWrite, Microsoft Word and Excel. Training in the use of microcomputers is available from the Office of Information Technology in the form of frequently scheduled short courses.

In addition, with the cooperation of the Health Sciences Library, there are four PC work-stations dedicated to bibliographic database searching. The four machines, located in the southwest corner of 2308 McGavran-Greenberg, access CINAHL (nursing and allied health); HealthPlan (health administration); and MEDLINE (medical) bibliographic databases. These databases are the same as the ones located in the Health Sciences Library, and they use the SilverPlatter search interface. The database work-stations also access several major university library card catalogs (called OPACS-online public access catalogs) around the country using Telnet communications on the Internet.

A fifth work-station accesses Davis Library CD-ROM databases: PsycLit, and electronic version of the printed index Psychological Abstracts; ERIC, access to journal articles and unpublished reports on a wide range of topics relating to education and comparable to the printed indexes Current Index to Journals in Education (CIJE) and Research in Education (RIE); and GPO Monthly, an index to all documents issued by the U.S. Government Printing Office.

Room 2307 is equipped with 16 PCs and a computer screen projector. This room may be reserved for instructional purposes by calling the CAIS Computer Center at 966-2341. When not reserved, the room is available for general student use. Room 2308 contains the remaining PCs, the Macintoshes and the CD-ROM access machines. It is available for general use with no reservations.

Departments may place their own software on the network according to procedures established by the Office of Information Technology.



Biostatistics

Chair
Barry H. Margolin
Professor

Registrar
Betty H. Pounders
Telephone # (919) 966-7262

Professors
James R. Abernathy
Clarence E. Davis
Ronald W. Helms
Alan F. Karr
David G. Kleinbaum[1]
Gary G. Koch
Lawrence L. Kupper
Dana E.A. Quade
Pranab K. Sen,
Cary C. Boshamer Professor
Richard H. Shachtman
Chirayath M. Suchindran
Michael J. Symons
Forrest W. Young

Professors Emeriti
Elizabeth J. Coulter
Regina C. Elandt-Johnson
James E. Grizzle
H. Bradley Wells

Research Professors
Richard E. Bilsborrow
John G. Fryer

Adjunct Professors
Harry A. Guess
David G. Hoel
Daniel G. Horvitz
Anders S. Lunde
W. Kenneth Poole
Ibrahim A. Salama
Babubhai V. Shah

Associate Professors
William D. Kalsbeek
Keith E. Muller
Kinh N. Truong
Craig D. Turnbull

Research Associate Professors
Shrikant I. Bangdiwala
Lloyd E. Chambless
James D. Hosking

Adjunct Associate Professors
Helen T. Bhattacharyya
John P. Creason
David M. DeLong
Edward L. Frome
Sandra B. Greene
Frank E. Harrell, Jr.
Grace E. Kissling
Kerry L. Lee
Judith T. Lessler
Timothy M. Morgan
Walter W. Piegorsch
Christopher J. Portier
Donald W. Reinfurt
Wilson B. Riggan
Steven M. Snapinn
Clarice R. Weinberg
Takashi Yanagawa

Assistant Professors
Jianwen Cai
Lloyd J. Edwards
Bahjat F. Qaqish
Francoise M. Seillier-Moiseiwitsch

Research Assistant Professor
Paul W. Stewart

Adjunct Assistant Professors
Ingrid A. Amara
Kerrie E. Boyle
Deborah V. Dawson
Elizabeth R. DeLong
Lisa M. LaVange
Imogene McCanless
Basil Samara
Marjolein V. Smith

Adjunct Instructors
Delton Atkinson
Priscilla A. Guild

Lecturer
Philip N. Gallagher

[1] Resigned May 31, 1993

Biostatistics

The Department of Biostatistics offers programs of study leading to an undergraduate degree (Bachelor of Science in Public Health), two master's degrees (Master of Public Health and Master of Science) and two doctoral degrees (Doctor of Public Health and Doctor of Philosophy).

The Bachelor of Science in Public Health (BSPH) program seeks to prepare students for entry-level statistical positions in health and related organizations, as well as for graduate training. Information about admission and course requirements for this degree is available on pages 12 – 14 of this catalog and in *The Undergraduate Bulletin* of the University.

The Master of Public Health (MPH) degree program is designed to prepare individuals for positions that require knowledge of the broad field of public health as well as specialized knowledge of biostatistics. The Master of Science (MS) degree program is designed to provide graduate training in both the theory and methods of biostatistics as applied to public health problems and to prepare students for doctoral programs in biostatistics.

April Hoyle

The Doctor of Public Health (DrPH) degree program emphasizes professional training aimed at preparing students for leadership positions in the general areas of applied research related to health problems and delivery of statistical services in the health field. To meet these objectives, the program is designed to equip students with a thorough knowledge of the technical aspects of the application of statistical techniques to a range of health problems and a basic knowledge of an applied area of public health. The Doctor of Philosophy (PhD) degree program is designed to provide advanced, research-oriented training in theory and methodology and to prepare individuals for academic careers and research positions in the government or elsewhere.

Graduate admissions are usually made initially for study toward a master's degree. Time requirements to obtain the degrees are typically 12 to 18 months for the MPH, two academic years for the MS and approximately three years for the doctoral degrees.

Biostatisticians apply their quantitative knowledge to a variety of special fields related to the health of people — such as the physical environment, the size and characteristics of the population, patterns of disease and disability and health service utilization and costs. In recognition of these different applications, the department provides for specialty options within biostatistics such as: biometry, cardiovascular studies, demography and population studies, cancer research, environmental biostatistics, health services and mental health statistics.

Further information about the Biostatistics training programs and requirements for admission are available in brochures which can be obtained by writing to the Department of Biostatistics, CB# 7400, School of Public Health, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-7400.

BIOS 97 Readings in Biostatistics (1-3)
Directed readings or laboratory study. May be taken more than once. Two to six laboratory hours a week. Staff.

BIOS 99 Honors Research in Biostatistics (3)
Prerequisite: BIOS 97. Directed research. Written and oral reports required. Fall, spring and summer. Staff.

BIOS 101 Fundamentals of Biostatistics (3)
Introduction to procedures in collection, summarization, analysis and presentation of data. Topics include sampling, experimentation, measurement, descriptive statistics, probability, confidence intervals and tests of hypotheses. Fall and summer. Quade.

BIOS 106 Mathematical Methods in Biostatistics (1)
Prerequisite: MATH 32. Calculus and special mathematical techniques necessary for biostatistics. Summer. Staff.

BIOS 107 Matrix Theory in Biostatistics (1)
Prerequisite: MATH 32. Review of matrix theory results useful in statistics. Summer. Staff.

BIOS 110 Principles of Statistical Inference (3)
Permission of the instructor required except for majors in School of Public Health who have knowledge of basic descriptive statistics. Major topics include elementary probability theory, probability distributions, estimation, tests of hypotheses, chi-square procedures, regression and correlation. Fall and spring. Turnbull, Shachtman.

BIOS 111 Introduction to Statistical Computing and Data Management (3)
Prerequisite: BIOS 101 or equivalent. Introduction to the use of computers to process and analyze data, components of digital computers, characteristics of magnetic storage devices, use of JCL and utility programs, concepts and techniques of research data management, use of statistical program packages and interpretation. Fall and spring. Gallagher.

BIOS 120 Special Techniques in Biometry (1-3)
Special topics of current interest in biometry. Fall, spring and summer. Staff.

BIOS 124 Some Quantitative Methods in Planning and Evaluation (3)
Prerequisite: BIOS 101 or equivalent or permission of instructor. Planning cycle, methods overview, data sources, PERT, budgeting, health indices, measurement of goal fulfillment, achievement, effectiveness, efficiency, research designs, benefit cost analysis, decision analysis, probability utility and decision trees. On request. Staff.

BIOS 130 Research Issues in Mental Health Statistics (3)
Prerequisites: BIOS 110 and EPID 160, or permission of instructor. Concepts of measurement, history and current status of classification schemata for mental disorders, methods of data analysis and research designs. On request. Turnbull.

BIOS 135 Probability and Statistics (4)
Prerequisite: MATH 32 or equivalent. Elements of descriptive statistics; basics of probability; random variables and their probability distributions; special distributions, including the binomial, Poisson, normal, gamma; expectation and moments; linear combinations of random variables. Elements of estimation and hypothesis testing; analysis of variance; multiple regression, analysis of categorical data, some nonparametric methods. Particular attention is given to the statistical treatment of environmental science and engineering problems. Fall. Symons.

BIOS 140 Problems in Biostatistics (1 or more)
Prerequisite: Individually arranged with faculty. A course for students of public health who wish to make a study of some special problem in the statistics of the life sciences and public health. Fall, spring and summer. Staff.

BIOS 145 Principles of Experimental Analysis (3)
Prerequisite: Biostatistics 110, 135 or equivalent and permission of instructor for non-SPH majors. Continuation of Biostatistics 110. Analysis of experimental and observational data, including multiple regression and analysis of variance and covariance. Fall and spring. Staff.

BIOS 150 Elements of Probability and Statistical Inference I (3)
[GNET 150] Prerequisite: MATH 32 or equivalent. Fundamentals of probability theory; discrete and continuous distributions; functions of random variables; fundamentals of statistical inference, including estimation and hypothesis testing. Fall. Shachtman.

BIOS 160 Probability and Statistical Inference I (3)
Prerequisite: MATH 33 or equivalent. Introduction to probability; discrete and continuous random variables; expectation theory; bivariate and multivariate distribution theory; regression and correlation; linear functions of random variables; theory of sampling; introduction to estimation and hypothesis testing. Fall. Kupper.

BIOS 161 Probability and Statistical Inference II (3)
Prerequisite: BIOS 160. Distribution of functions of random variables; central limit theorem; estimation theory; maximum likelihood methods; hypothesis testing; power, Neyman-Pearson Theorem, likelihood ratio tests, non-central distributions. Spring. Kupper.

BIOS 162 Introductory Applied Statistics (3)
Prerequisites: BIOS 111 and 150 or equivalents. Approaches to problems of description and goodness of fit, univariate location and scale, bivariate independence and correlation and comparison

of independent or matched samples, involving categorical, discrete, normal or ranked data. Spring. Quade.

BIOS 163 Intermediate Linear Models (3)
Prerequisites: BIOS 107 or MATH 147; BIOS 111; 145; 150 or equivalents. Regression analysis in matrix terms, general linear hypothesis, diagnostics, model building. One- and two-way ANOVA with fixed or random effects. Power; algorithms; analysis of covariance. Fall. Muller.

BIOS 164 Sample Survey Methodology (3)
[STAT 104] Prerequisite: BIOS 150 or equivalent or permission of instructor. Fundamental principles and methods associated with survey sampling, giving primary attention to as non-mathematical as possible a treatment of simple random sampling, stratified sampling and cluster sampling. Techniques of questionnaire design, the problems of nonresponse and sources of non-sampling errors. Practical experience in the applied aspects of sampling is provided by student participation in the design, execution and analysis of an actual survey. Spring. Kalsbeek.

BIOS 165 Analysis of Categorical Data (3)
Prerequisites: BIOS 145, 150, and 162 or permission of instructor. Introduction to the analysis of categorized data: rates, ratios, and proportions; relative risk and odds ratios; Cochran-Mantel-Haenszel procedure; survivorship and life table methods; linear models for categorical data. Applications in demography, epidemiology, and medicine. Fall. Koch.

BIOS 166 Applied Multivariate Analysis (3)
[STAT 160] Prerequisite: BIOS 163 or equivalent. Application of multivariate techniques, with emphasis on the use of computer programs. Multivariate analysis of variance, multivariate multiple regression, weighted least squares, principal component analysis, canonical correlation and related techniques. Spring. Muller.

BIOS 167 Applied Stochastic Processes (3)
Prerequisite: BIOS 161 or equivalent. Markov chains, Poisson processes and extensions, epidemic models, branching processes and other stochastic models of empirical processes. Disease, population and other biostatistical applications. Fall and spring. Sen.

BIOS 168 Design of Public Health Studies (3)
Prerequisites: BIOS 145, 150 or equivalents. Statistical concepts in basic Public Health study designs: cross-sectional, case-control, prospective and experimental (including clinical trials). Validity, measurement of response, sample size determination, matching and random allocation methods. Spring. Davis.

BIOS 170 Demographic Techniques I (3)
Prerequisite: BIOS 101 or equivalent. Source and interpretation of demographic data; rates and ratios, standardization, complete and abridged life tables; estimation and projections of fertility, mortality, migration and population composition. Fall. Suchindran, Bilsborrow.

BIOS 180 Introductory Survivorship Analysis (3)
Prerequisite: BIOS 161 or permission of instructor. Introduction to concepts and techniques used in the analysis of time to event data, including censoring, hazard rates, estimation of survival curves, regression techniques, applications to clinical trials. Spring. Staff.

BIOS 191 Field Observations in Biostatistics (1)
Field visits to and evaluation of major nonacademic biostatistical programs in the Research Triangle area. Field Fee: $25. Fall. Turnbull.

BIOS 213 Data Management in Biostatistics (3)
Prerequisite: BIOS 111 or equivalent. Experience in programming in a procedural language (PL-1, FORTRAN, C, BASIC, etc.) is assumed. Techniques for designing, implementing and operating computerized data management systems for large studies with particular emphasis on collaborative medical studies. Spring and summer. Hosking.

BIOS 215 Health Data Processing Laboratory (1-3)
Prerequisite: BIOS 213. A laboratory course for students who wish to gain experience in the data-processing aspects of current projects and collaborative medical studies of the department. Two or more hours a week. Fall, spring and summer. Hosking.

BIOS 231 Bayesian Statistics (3)
Prerequisites: BIOS 161 or equivalent. Bayesian perspective on statistical theory (foundations and inference); decision theory; applications of prior to posterior analysis, predictive inference; numerical and stochastic simulation techniques; estimation of distributions via empirical Bayes methodology. Fall. Seillier-Moiseiwitsch.

BIOS 240 Specialized Methods in Health Statistics (1 or more)
Permission of instructor required. Statistical theory applied to a special program area of timely importance in the life sciences and public health. Lectures, seminars and/or laboratory work, according to the nature of the special area under study. Fall, spring and summer. Staff.

BIOS 250 Advanced Techniques in Biometry (1-4)
Prerequisites: BIOS 161, 163 or equivalents. Permission of instructor required. Knowledge of elementary computer programming is assumed. Up to three or four separate one-semester-hour modules presenting advanced techniques in biometry (topics covered usually vary at each offering). Summer. Staff.

BIOS 256 Introduction to Nonparametric Statistics (3)
[STAT 171] Prerequisite: BIOS 161 or equivalent. A knowledge of elementary computer programming is assumed. Theory and application of nonparametric methods for various problems in

statistical analysis. Includes procedures based on randomization, ranks and U-statistics. Fall. Bangdiwala.

BIOS 257 Nonparametric Procedures in Biometric Research (3)
Prerequisite: BIOS 256 or equivalent. Nonparametric point and interval estimation in linear models useful in biometric research. Robust procedures, including those based on ranks, for analyzing designed experiments, bioassays and clinical trials. Spring. Sen.

BIOS 259 Applied Time Series Analysis (3)
Prerequisies: BIOS 161 and 163 or equivalents. Permission of instructor required. Topics include correlograms, periodograms, fast Fourier transforms, power spectra, cross-spectra, coherences ARMA and transfer models, spectral-domain regression. Real and simulated data sets will be discussed and analyzed using popular computer software packages. Spring. Truong.

BIOS 260 Large Sample Theory (3)
Prerequisite: BIOS 161. Corequisite: MATH 121. Stochastic convergence, probability inequalities, empirical distributions, order statistics, central limit theorems, large sample theory of statistical tests and estimates, categorical data models. Fall. Sen.

BIOS 262 Generalized Linear Models (3)
Prerequisites: BIOS 161, 163. Introduction to the theory of generalized linear models and its extensions, quasi likelihoods and generalized estimating equations. Fall. Qaqish.

BIOS 263 Advanced Linear Model Theory (3)
Prerequisites: BIOS 161, 163; MATH 147; MATH 116 or 137. Multivariate normal and related distributions; theory of estimation and statistical inference for multivariate linear models. Spring. Stewart.

BIOS 264 Advanced Survey Sampling Methods (3)
Prerequisite: BIOS 164 or equivalent. Continuation of BIOS 164 for advanced students. Stratification, special designs, multistage sampling, cost studies, nonsampling errors, complex survey designs, employing auxiliary information and other miscellaneous topics. Fall, alternate years. Kalsbeek.

BIOS 265 Linear Models in Categorical Data Analysis (3)
Prerequisite: BIOS 161, 163, 165 and 166 or equivalent. Theory of statistical methods for analyzing categorical data by means of linear models, multifactor and multiresponse situations; interpretation of interactions. Spring. Koch.

BIOS 266 Advanced Linear Model Methods (3)
Corequisite: BIOS 263. Analysis of multivariate linear models, including regression, MANOVA and mixed models and introduction to modeling covariance matrices. Spring. Helms.

BIOS 267 Linear Models II (4)
Prerequisite: BIOS 263, 266 and/or equivalents. Principal components, discriminant functions, canonical variates, repeated measurements experiments, analysis of longitudinal data, components of variance. Spring. Truong.

April Hoyle

BIOS 271 Demographic Techniques II (3)
Prerequisites: BIOS 170 and integral calculus. Life table techniques; methods of analysis when data are deficient; population projection methods; interrelations among demographic variables; migration analysis; uses of population models. Spring. Suchindran.

BIOS 277 Mathematical Models in Demography (3)
Permission of instructor required. A detailed presentation of natality models, including necessary mathematical methods and applications; deterministic and stochastic models for population growth, migration, etc. Spring, alternate years. Suchindran.

BIOS 280 Theory and Methods for Survival Analysis (3)
Prerequisite: BIOS 180 or permission of instructor. Continuation of BIOS 180 with detailed discussion of semiparametric likelihoods, time dependent covariates, robustness and tests of assumptions, covariate adjustment and multivariate analysis. Fall. Staff.

BIOS 281 Statistical Methods in Human Genetics (3)
[GNET 281] Prerequisite: BIOS 161 or permission of instructor. An introduction to statistical procedures in genetics, Hardy-Weinberg equilibrium, linkage disequilibrium, segregation analysis, linkage analysis methods (including usage of genetics software packages) and analysis of molecular genetic data. Spring, alternate years. Staff.

BIOS 341 Principles of Statistical Consulting (1)
Prerequisite: BIOS 145 or equivalent. Permission required for non-BIOS majors. An introduction to the statistical consulting process, emphasizing its non-technical aspects. Fall and spring. Symons.

BIOS 342 Practice in Statistical Consulting (1-3)
Prerequisites: BIOS 111, 145, 150, 341 or equivalents. Permission of instructor required. Under supervision of a faculty member, the student interacts with research workers in the health sciences, learning to abstract the statistical aspects of substantive problems, to provide appropriate technical assistance and to communicate statistical results. Fall, spring and summer. Staff.

BIOS 350 Training in Statistical Teaching in the Health Sciences (2 or more)
Prerequisite: Minimum of one year of graduate work in statistics. Principles of statistical pedagogy. Students are responsible for assistance in teaching elementary statistics to students in the health sciences. Students work under the supervision of the faculty, with whom they have regular discussions of methods, content and evaluation of performance. Fall, spring and summer. Staff.

BIOS 389 Research Seminar in Biostatistics (1-3)
Permission of instructor required. Seminar on new research developments in selected biostatistical topics. Fall and spring. Staff.

BIOS 390 Research in Biostatistics (2 or more)
Individual arrangements may be made by the advanced students to spend part or all of his/her time in supervised investigation of selected problems in statistics. Fall, spring and summer. Staff.

BIOS 392 Master's Paper (1-3)
Fall, spring and summer. Staff.

BIOS 393 Master's Thesis (0-6)
Fall, spring and summer. Staff.

BIOS 394 Doctoral Dissertation (0-9)
Fall, spring and summer. Staff.

BIOS 400 General Registration (0)

Environmental Sciences & Engineering

Chair
William H. Glaze
Professor

Student Services Manager
C.L. Lassiter
Telephone # (919) 966-3844

Air, Radiation & Industrial Hygiene

Professors
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Program Area Director
Edward L. Chaney
Donald L. Fox
Harvey E. Jeffries
R. Eugene Johnston
Stephen M. Rappaport
Parker C. Reist
Carl M. Shy
James E. Watson, Jr.

Professor Emeritus
Robert L. Harris, Jr.

Research Professor
Richard M. Kamens

Visiting Professor
Bengt C. Ljungqvist

Adjunct Professors
Merril Eisenbud
David S. Ensor
William E. Wilson

Associate Professors
Douglas J. Crawford-Brown
Donald G. Willhoit

Adjunct Associate Professors
John M. Dement
Philip E. Hamrick
John L.S. Hickey
Donald A. Tyndall

Assistant Professors
Michael R. Flynn[1]
Lori A. Todd

Research Assistant Professor
Stephen R. McDow

Adjunct Assistant Professors
Woodhall Stopford
David B. Washburn
Russell W. Wiener

Adjunct Instructor
Bobby M. Wilson

Lecturer Emeritus
Ted M. Williams

Aquatic & Atmospheric Sciences

Professors
Russell F. Christman,
Program Area Director
Donald L. Fox
William H. Glaze
Harvey E. Jeffries
Frederic K. Pfaender
Parker C. Reist
Philip C. Singer

Professors Emeriti
J. Donald Johnson
Edward J. Kuenzler
Mark S. Shuman
Charles M. Weiss

Research Professor
Richard M. Kamens

Adjunct Professors
Hans W. Paerl
Barbara T. Walton

Adjunct Associate Professors
Phillip W. Albro
J. Ronald Hass
Joseph Pinto

Assistant Professor
Michael D. Aitken

Research Assistant Professors
M. Judith Charles
Stephen R. McDow

Adjunct Assistant Professor
Daniel L. Norwood

Lecturer
Donald E. Francisco

Environmental Health Sciences

Professors
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Program Area Director
Avram Gold
Stephen M. Rappaport
Carl M. Shy
James A. Swenberg

Adjunct Professor
Linda S. Birnbaum

Associate Professors
Douglas J. Crawford-Brown
Thomas R. Skopek

Adjunct Associate Professors
Larry D. Claxton
David M. DeMarini

Assistant Professor
Louise M. Ball[2]

Research Assistant Professor
Y.S. Carol Shieh

Adjunct Assistant Professor
Jane Ellen Simmons

Environmental Management & Policy

Professors
Richard N.L. Andrews,
Program Area Director
Donald L. Fox
Milton S. Heath, Jr.
Donald T. Lauria
David H. Moreau
Alvis G. Turner, Jr.

Professors Emeriti
Emil T. Chanlett
Morris A. Shiffman

Associate Professor
Douglas J. Crawford-Brown

Research Associate Professor
Frances M. Lynn

Adjunct Associate Professors
Michael A. Berry
Linda W. Little

Assistant Professor
Deborah A. L. Amaral

Adjunct Assistant Professor
Dennis F. Naugle

Water Resources & Engineering

Professors
Philip C. Singer,
Program Area Director
Francis A. DiGiano
Milton S. Heath, Jr.
Donald T. Lauria
David H. Moreau

Kenan Professor Emeritus
Daniel A. Okun

Professors Emeriti
David H. Howells
Maynard M. Hufschmidt

Associate Professos
Cass T. Miller
Dale Whittington

Adjunct Associate Professors
John Briscoe
Richard A. Luettich, Jr.

Assistant Professors
Michael D. Aitken
George Christakos

[1] Associate Professor as of Aug. 1, 1993
[2] Associate Professor as of Dec. 1, 1993

Environmental Sciences & Engineering

The Department of Environmental Sciences and Engineering is the nation's oldest and largest program offering research-based education in environmental science and policy. The department offers degrees in five academic programs: Air, Radiation and Industrial Hygiene; Aquatic and Atmospheric Sciences; Environmental Health Sciences; Environmental Management and Policy; and Water Resources Engineering. Information about each individual program is provided below.

The Master of Science (MS), Master of Science in Public Health (MSPH) and Master of Public Health (MPH) degrees are offered in each area. The general University and School of Public Health requirements for these degrees are listed on pages 11–18. A bachelor's degree with a major in engineering or science, usually chemistry, biology, physics or geology is a requirement for admission in most programs. However, the Environmental Management and Policy area accepts an undergraduate degree in a relevant social science if the student also has solid academic preparation in natural sciences and mathematics. Coursework assumes that applicants have successfully completed science or engineering courses including physics, chemistry, biology and calculus.

The Master of Science in Environmental Engineering (MSEE) degree is offered by the programs of Air, Radiation and Industrial Hygiene and Water Resources Engineering. See page 17 for admission and degree requirements. Candidates for this degree must hold an engineering degree from an institution accredited by the Accreditation Board for Engineering and Technology, Inc. or an equivalent foreign institution. Backgrounds in civil, environmental, chemical or mechanical engineering, where the curriculum has involved fundamental work in chemistry, physics, mathematics and the engineering sciences, are preferred. One- and two- year programs are offered in each area.

General departmental courses are offered in Sources, Transport and Fate of Environmentally Important Materials; Health and Ecological Effects of Environmental Agents; and Environmental Management and Policy. These courses are formulated to represent the intellectual core of Environmental Sciences and Engineering.

UNC News Services/ Dan Sears

The Doctor of Philosophy (PhD) is offered in each of the programs. In general, applicants without master's degrees are required to pursue the PhD via a master's degree. Direct admission to the PhD program may be possible for the exceptional student. Four semesters of full-time graduate study, at least two of which must be earned in continuous registration on this campus, are necessary. Based upon past experience, actual residence time usually requires a minimum of two years following a master's degree, with a median of three and one-half years.

Other PhD requirements include a major in one of the program areas and a supporting program or minor of at least 15 semester hours, excluding seminar and research units, selected to be of maximum benefit in the conduct of the research and preparation of the dissertation. Course programs leading to the PhD are too individualized to permit illustration; knowledge in the three areas reflected in the general departmental courses is required of all PhD students. The department and the University require knowledge of a research skill or foreign language for the PhD degree. Doctoral written and oral examinations are customarily given upon completion of coursework and prior to approval of a research proposal for the dissertation. The defense of the dissertation is the final oral examination for the doctorate.

Interdisciplinary studies are encouraged and coordinated by organizations within the University, such as the Institute for Environmental Studies, the Water Resources Research Institute and the Institute of Marine Sciences. Joint programs of study, such as the specialty in radiological hygiene offered with North Carolina State University in Raleigh, draw on the specific resources of each group with students developing their major interest depending on their training in basic disciplines.

Courses offered by the Department of Environmental Sciences and Engineering are described on pages 42–50 of this catalog. Courses may be taken at Duke University and at North Carolina State University without payment of additional tuition.

The department has informational flyers for each program area and publishes *ESE Notes*, which is available on request. For departmental flyers, please contact C.L. Lassiter at (919) 966-3844; for *ESE Notes*, contact Frank Pore, departmental administrative assistant, at (919) 966-4175.

Air, Radiation and Industrial Hygiene

The Air, Radiation and Industrial Hygiene (ARIH) Program provides graduate education in air pollution control, radiation protection and industrial hygiene. Students in the ARIH program select one of the three tracks for specialization. All are areas of preventive public health in which the professional recognizes and evaluates a problem, considers alternative control measures and weighs the cost of control against the long-term cost of inaction.

Air pollution control is concerned with pollutants released into the atmosphere. Important considerations include the sources of these pollutants, engineering methods for their control, their transport and chemical transformations in the atmosphere and their effects on human health and the environment.

The radiation protection program is concerned with the interaction of radiation with physical and biological systems. Based on study of the mechanisms of radiation damage and of radiation standards, the health physicist develops procedures to evaluate radiation hazards and ensure the protection of humans and their environment.

Industrial hygiene is concerned with the recognition, evaluation and control of environmental factors in the workplace that cause sickness, impaired health and well-being, or significant discomfort and inefficiency among workers or citizens of the community.

Career opportunities in this field are excellent. Graduates find employment with industry, consulting firms, universities or research laboratories and with state and federal agencies such as the Environmental Protection Agency, the Nuclear Regulatory Commission, the Department of Energy and the National Institute for Occupational Safety and Health.

Those wishing to enroll in this program must have an academic background that includes adequate preparation in calculus, chemistry and physics. Master's programs generally take two years; the PhD takes three or more years beyond the master's degree. Those seeking the PhD degree almost always must earn a master's degree first, either at UNC or elsewhere.

Aquatic and Atmospheric Sciences

Aquatic and Atmospheric Sciences (AAS) provides research-based graduate education focused on sources, transport and transformation of natural and anthropogenic materials in stressed and unstressed multimedia environments. Study of mechanisms that control environmental processes is emphasized, but experimental and perturbed ecosystems and remediation practices are also considered. The program covers a broad range of environmental topics, extending from subcellular processes to ecosystem- and global-level processes, including the modeling of transport and transformation of aquatic and atmospheric pollutants.

This program aims to provide students with theoretical, observational and experimental knowledge concerning processing of environmentally important materials. Emphasis is on materials resulting from human activities which adversely affect the natural environment. The scope includes identification of sources and chemical species, examination of modes and rates of transport, and analysis of types and rates of transformations, magnitudes of effects and ultimate fates. Students are expected to gain an understanding of how changes and disturbances in terrestrial, aquatic and atmospheric systems affect the atmosphere and hydrosphere, feedback processes, ecosystem structure and functioning, and human well-being. The program offers courses which explore physical, chemical and biological processes in the aquatic environment and physical and chemical processes in the atmosphere which control routes and rates of materials cycling in the modern world.

Specific disciplines represented within the faculty include analytical, organic, physical and atmospheric chemistry, biochemistry, ecology, limnology and microbiology. The program has close working relationships with the Department of Chemistry, the Department of Geography, the Curriculum in Marine Sciences and the Curriculum in Ecology. Students may take courses at Duke University and North Carolina State University and may enlist appropriate faculty from these curricula to serve on their graduate committees. They may also interact with many scientists at Research Triangle Park.

The AAS program seeks a broad regional and global perspective by interrelating aquatic and atmospheric processes in coursework and in research projects. However, because much current research has more restricted goals, students usually develop a specialty within their coursework and their thesis research. Accordingly, three tracks within the program area are recognized: an Aquatic Chemistry track, an Atmospheric Chemistry track and an Aquatic Biology and Ecology track.

Applicants to this program are expected to have a strong undergraduate science degree, including a year of calculus and one or more courses in physics, chemistry and biology. Applicants planning to enter the aquatic or atmospheric chemistry track are expected to have taken physical chemistry; those entering the biology and ecology track should have academic preparation in ecology. Undergraduate courses in geology, soil science, limnology, oceanography, meteorology, modeling or computer science are desirable. Exceptionally well-qualified students lacking strong chemistry or biology backgrounds are encouraged to apply; deficiencies in coursework should be made up during the first year.

Graduate degrees are offered at the master's (MSPH and MS) and doctoral (PhD) levels. The Master of Science in Public Health (MSPH), a professional degree granted by the School of Public Health, requires completion of one course each in epidemiology and biostatistics. All AAS students are required to take ENVR 133; three credits of coursework in Environmental Management and Policy (ENVR 153 recommended); and three credits of coursework in Environmental Health Sciences (ENVR 191 recommended). Knowledge of the

subject matter covered in these courses is expected of all graduates of the AAS program regardless of thesis or dissertation research topic or other coursework at UNC. Students may petition for exemption from any or all of these core requirements if they show that they have had equivalent prior course experience. Elective courses will be selected to satisfy educational needs of the particular student. A written technical report based on original laboratory, field or modeling research, conducted under the supervison of the faculty research advisor, is required. Students spend about a third of their time completing the research project. The MSPH degree may take two or more years, depending upon the student's interests, background, ability and availability of financial support. Research assistants are limited to a course load of nine hours per semester.

The MS and PhD degrees are granted by the UNC Graduate School; accordingly all Graduate School requirements for these degrees must be met. Students working toward these degrees must have graduate committees to approve the course of study, administer examinations, approve the research project and evaluate the thesis or dissertation. Students seeking the MS degree must take both of the ENVR and AAS core courses listed for the MSPH degree above. Expectations for the MS thesis are similar to those for the MSPH report, as outlined above. PhD students are expected to have a depth of knowledge in all ENVR and AAS core course material. The PhD degree is heavily research oriented and the dissertation must constitute a significant, original contribution. Formal courses are selected by the student for approval by his/her PhD committee to meet both the needs of the research program and the particular needs of the student. The doctoral degree normally requires three or more years past the master's degree to complete Graduate School and departmental requirements. Many candidates work half time as research assistants on funded research projects.

This program prepares students for careers in the sciences of water resources, limnology, aquatic ecology, environmental chemistry (aquatic and atmospheric), environmental microbiology, atmospheric modeling and pollution control. Master's degree graduates are employed with local, national and international agencies and governments, consulting engineers and industry. They serve as environmental managers, directors of field and laboratory research projects and as members of teams in water resources management and process development. PhD graduates hold positions on the faculties of many colleges and major universities in biology, public health and environmental engineering programs; as environmental managers and directors of major environmental programs in local, national and international agencies; and as research scientists and senior environmental staff members in industry, consulting firms and governmental agencies.

Environmental Health Sciences

The Environmental Health Sciences (EHS) curriculum is designed to provide students with a research-oriented graduate education that is focused on the predictive and mechanistic understanding of the interactions of environmental agents, including pollutants, with biological systems at the molecule, cell, organism, population and community levels. The curriculum is intended to supply the knowledge base and methodologies necessary for understanding the adverse effects of environmental agents on biological systems and for prediction of the magnitude of risk, thereby establishing a rational basis for the control of environmental exposures.

The curriculum emphasizes the following topics at both fundamental and advanced levels: (1) identification of and sources of exposure to environmental agents, with emphasis on chemicals, infectious agents and radiation; (2) the interactions of these agents with biological systems, including routes of entry, patterns of distribution, metabolism, elimination and other activities, especially adverse effects on humans and other exposed organisms; (3) the mechanisms of adverse effects of environmental agents on biological systems; (4) the measurements of biological end points, especially dosimetry of adverse effects; and (5) the development of mathematical models for prediction of adverse effects on biological systems.

The EHS curriculum is organized around four primary courses: Health Effects of Environmental Agents; Techniques in Environmental Health Effects; Sources, Transport and Fate of Environmental Materials; and Environmental Management and Policy. These core courses are followed by more advanced courses emphasizing either environmental toxicology, infectious agents and human health or other curriculum specialties selected by the students with their advisor(s) according to the student's interests and long-term goals. In addition to departmental courses, students are encouraged to consider relevant courses offered elsewhere in the University and at other nearby universities.

As required by the Graduate School, candidates for the master's degree must complete 30 credits, including at least 24 semester hours of coursework and three hours of thesis or thesis equivalent. Course requirements for the PhD degree are selected by the student and his/her doctoral committee and must include at least three credit hours of doctoral dissertation and 15 credit hours of a supporting program. Students pursuing the Master of Public Health (MPH) or Master of Science in Public Health (MSPH) degrees must meet the coursework and other academic requirements of the School of Public Health (and the Council on Education in Public Health), including at least one course each in Biostatistics and Epidemiology (and for MPH students one course in a field relevant to health services delivery systems). Students working toward the PhD degree and either of the Master of Science degree options (MS or MSPH) must engage in a substantive research effort culminating in the production of a doctoral dissertation or master's thesis (or master's technical report), respectively. MS, MSPH and MPH students must take at least five, three and two advanced courses, respectively, in their curriculum specialty. In order to meet Graduate School requirements, PhD and MS students must have their academic programs, including courses, research topics, dissertation or thesis, and examinations approved by their selected graduate faculty committee.

Incoming students must have a sound background in mathematics (including one year of calculus) and the basic sciences, including chemistry (at least one year through organic), biology (at least one year), physics (at least one semester) and biochemistry (at least one semester). These requirements can be met through formal college-level courses or equivalent work knowledge and experience. Applicants who are otherwise highly qualified but lack this background are encouraged to apply with the understanding that they will have to make up these course deficiencies by successful (C grade or better) completion of undergraduate or graduate courses during their first year of matriculation. Admission to the PhD program typically requires a previously earned master's degree or equivalent in an appropriate field, but exceptionally qualified students having a strong undergraduate degree will be considered for admission directly into the PhD program. Admission is contingent upon sponsorship by an individual faculty member.

Environmental Management and Policy

Environmental Management and Policy (EMP) involves the identification and selection of courses of action that may be taken to protect human health and the environment. Such actions range from local decisions, such as how to manage waste materials and energy and where to site new facilities, to state and federal regulatory decisions and national and global strategies for managing broad patterns of human activities — resource extraction, deforestation and urbanization, use of toxic chemicals, emissions of air and water pollutants and others — that can harm environmental processes and human health.

The goal of the EMP program is to prepare students for professional careers in which they must recommend, choose and implement environmental protection policies and management decisions. Such careers require a clear understanding of relevant scientific and technical questions; but equally, they require strong grounding in the economic, legal, behavioral and political considerations that are also involved and the ability to make complex decisions under conditions of scientific uncertainty and political value conflict.

UNC-CH News Services/ Dan Sears

All applicants are expected to have basic academic preparation in the natural sciences, normally including chemistry and biology, and mathematics through calculus. At least one prior course in economics is also desirable. Most successful applicants hold a prior bachelor's degree in either a natural or social science or engineering; a strong combination of natural sciences with public policy, economics or other behavioral sciences is especially appropriate. However, exceptionally well-qualified students from any relevant field are encouraged to apply. If their academic preparation does not meet all these requirements, they may be admitted on evidence of especially strong ability or experience with the condition that deficiencies be made up during their first year.

At the master's level, all EMP students are expected to complete a core curriculum providing them with a common body of basic knowledge, principles and methods for environmental management and policy. Beyond this core, each student is given great flexibility to develop more specialized expertise, either in particular applications (such as air or water quality management or solid and hazardous waste management) or in methodological skills (such as risk assessment, benefit-cost analysis, quantitative decision analysis or policy evaluation). The master's degree normally requires two years to complete and the doctorate an additional two to three years.

Students pursuing the professional master's degree (MSPH) in EMP are expected to complete a core curriculum, a concentration on a particular application or methodology (for instance, waste management or risk assessment) developed individually in consultation with their faculty advisor and a professional-quality master's technical report. Before graduating, each student is expected to pass both a comprehensive oral examination, covering general knowledge as well as their own application area of environmental management and policy and an oral defense of the master's technical report or thesis. A minimum of 30 credit hours is required; most students take closer to 45. At least 15 hours of course credits (exclusive of research and thesis) must be completed within the Environmental Sciences and Engineering Department.

EMP degree requirements for the more academically oriented MS and PhD degrees are established for each student individually by their faculty advisory committee. In each case, the course of study must prepare the student to write a thesis or dissertation which makes a substantive and original contribution to theoretical or empirical understanding of a topic in environmental management and policy.

Water Resources and Engineering

The Water Resources Engineering (WRE) program is designed to prepare graduates to enter positions in several different areas of water resources and water quality engineering. Its overall goal is the development of technical skills, social awareness and professional attitudes necessary for efficient entry and growth in water resources engineering careers. Upon completion of the program the graduate should be qualified to participate in investigating, planning, designing, constructing, operating and regulating water resources systems and programs. Past Water Resources Engineering graduates have joined many types of agencies

and organizations, including the federal government, state regulatory agencies, public and private utilities, consulting firms, industries, the military services and research organizations.

The Master of Science in Environmental Engineering (MSEE) degree is offered to students with baccalaureate degrees in engineering from accredited undergraduate programs.

The curriculum is developed to meet specific needs and interests of each candidate within the framework of flexible overall requirements for exposure to content areas judged by the faculty to be basic necessities for the degree. These minimum requirements include 24 semester hours of formal coursework, of which 15 hours must be from engineering courses within WRE, and six semester hours of MS research and report-writing. Most students exceed these minimum requirements, taking additional courses from within WRE, other program areas or other departments on the UNC campus (e.g., chemistry, biology, mathematics and city and regional planning).

The variety of course offerings provides latitude for the student and faculty advisor to plan a study program meeting needs of the individual candidate.

The master's program may be directed toward: (1) technical aspects of water supply and treatment, waste-water and hazardous waste treatment and disposal, and surface and ground water quality management; (2) planning, engineering, economic and administrative aspects of water resources development and management; or (3) a combination of these approaches. The program requires a minimum of 12 months, although most students remain for one or two additional extra semesters to complete courses or for independent study.

Under some circumstances, students with a non-engineering undergraduate degree may also enroll in the WRE program and conduct a related research project, receiving the MS or MSPH degree. These degrees permit advanced training of interdisciplinary professionals, such as chemists, biologists and geologists, for participation in water resources engineering activities and allow more flexibility for engineers wishing to prepare for practice across broad aspects of the field. Occasionally, engineers employed by health agencies are encouraged or required to obtain an MSPH degree, often in preparation for administrative posts. These candidates may require less emphasis on design or other technical aspects and more on administration of water resources or community health programs. Science or engineering students interested in the interdisciplinary aspects of water resources planning may prepare for careers based on operations research, systems analysis, resource economics and other areas not directly related to the design, construction or operation of water resources systems and waste-water treatment facilities.

The PhD degree with a major in water resources engineering provides the student with more in-depth knowledge through further coursework in water resources engineering, a minor or other program of study supporting the chosen area of research and an intensive period of research. The goal is to develop understanding of current problems in the field beyond that acquired at the master's level. The PhD candidate must master methods for acquiring knowledge from various fields required to solve future problems, techniques for applying that knowledge to synthesize new solutions for water resources problems and communication of investigation results to others through oral and written presentations. PhD students have individual course plans which must meet three requirements: a major (e.g., Water Resources Engineering); a 15-semester-hour core in a supporting area (e.g., chemistry, biology, mathematics); and six semester hours of a research skill (e.g., foreign language, statistics, mathematics, computer programming).

ENVR 51 Environmental Protection (3)
Prerequisite: Natural science requirement of the General College. A human-centered study of the health, economic, ecological and aesthetic effects of our use of water, air and land. The physical, biological and chemical processes that occur in nature are studied, particularly as they relate to man's activities and his generation of waste residues, heat, noise and radiation. Methods of control and for abatement of environmental degradation are presented. Three lecture hours a week. Fall and spring. Francisco.

ENVR 95 Analysis and Solution of Environmental Problems (3)
Prerequisites: ENVR 51 and permission of instructor. A selected environmental problem is analyzed for causes, methods of mitigation and feasibility of proposed solutions. One lecture and two seminar hours per week. Fall, spring and summer. Crawford-Brown.

ENVR 98 Senior Thesis (3)
Permission of instructor required. Development, research and writing of senior thesis for environmental sciences undergraduates. Three lecture hours per week. Fall, spring and summer. Crawford-Brown.

ENVR 99 Undergraduate Research (3)
Directed readings or laboratory study. Written report is required. May be taken more than once for credit. Six to nine hours per week. Fall, spring and summer. Staff.

ENVR 100 Reading in Environmental Sciences and Engineering (1-6)
Permission required for non-ENVR students. Extensive library study of a specific subject in environmental sciences and engineering. The subject and requirements of the project are arranged with the faculty in each instance. Fall, spring and summer. Staff.

ENVR 101 Survey of Environmental Problems (3)
A survey of basic environmental issues for the non-technologist, including physical dynamics of the natural environment, specific environmental problems and quality control techniques. Spring. Crawford-Brown.

ENVR 111 Introduction to Environmental Policy (3)
Current issues in environmental protection. Analysis of environmental problems and decisions from the viewpoints of the various disciplines concerned with risk, policy development and environmental management. Fall. Staff.

ENVR 117 Engineered Water Systems and Health (3)
Prerequisites: BIOS 105 and MATH 34 or equivalents. Permission of instructor required. The quantitative assessment of the effects of water supply and waste-water disposal practices on infectious and environmentally derived diseases. Examples drawn from developed and underdeveloped countries. Attention given to implications for engineering design. Fall. Briscoe.

ENVR 118 Quantitative Studies for Environmental Sciences (3)
Applied mathematics from the viewpoint of those studying environmental science. Specific aspects of differential and integral calculus are developed as needed in environmental hygiene. Second summer session. Reist.

ENVR 121 Aquatic and Atmospheric Chemistry Processes and Mechanisms (3)
Prerequisite: One year of college chemistry. Material and chemical cycling, transport and reactions, redox and photochemistry, equilibrium kinetics of substances in atmospheric and aquatic environments. Three lecture hours per week. Fall. Staff.

ENVR 122 Chemical Equilibria in Natural Waters (3)
Principles and applications of chemical equilibria to natural waters. Acid-base, solubility, complex formation and redox reactions are discussed. Problem-solving approach is used to illustrate chemical speciation and environmental implications. Three lecture hours a week. Fall. Singer.

ENVR 122L Aquatic Chemistry Laboratory (1)
Corequisite: ENVR 122. Wet chemical and computational laboratory exercises illustrating principles and applications of chemical equilibria in natural waters. Two laboratory hours per week. Fall. Singer

ENVR 123 Organic Materials in Natural Waters (3)
Prerequisites: Organic chemistry, instrumental analysis or permission of the instructor. Origins of natural product organic materials in rivers and lakes. Survey of synthetic organic waste sources, microbial transformations and metal transport properties. Organic water-quality monitoring and rationale for water-quality criteria and standards. Spring, alternate years. Christman.

ENVR 124 Environmental Analytical Chemistry (3)
Sampling, sample treatment, data evaluation, electrochemical, spectrophotometric and mass spectral techniques for students with no analytical chemistry background. Three lecture hours per week. Spring. Shuman, Charles.

ENVR 127 Oceanography (3)
[MASC 101, BIOL 126, GEOL 101] Prerequisite: One college-level course in biology, chemistry, geology or physics. An interdisciplinary study of the sea and the interrelationship of marine processes. Three lecture hours a week. Fall and spring. Frankenberg.

ENVR 128 Chemical Oceanography (4)
[MASC 105] Prerequisites: One semester of physical chemistry or ENVR 122; CHEM 180 or equivalent. Variation and

abundance of the sea water constituents, and the chemical, physical and biological processes contributing to their distribution as well as problems of dispersion of conservative and nonconservative substances are considered. Spring. Martens.

ENVR 132 Limnology and Water Pollution (4)
Prerequisites: One year each of biology and chemistry. Basic aspects of physical, chemical and biological limnology, including impacts of anthropogenic pollutants and relationships to watersheds, streams and estuaries. Three lecture and two laboratory hours per week. Spring. Staff.

ENVR 133 Sources, Transport and Fate of Environmentally Important Materials (3)
Prerequisites: One year of college chemistry; one semester each of college physics, calculus and biology or permission of instructor. Multi-media processes important in environmental compartments. Development of predictive abilities for spatial and temporal alterations and movements of materials. Three lecture hours per week. Spring. Staff.

ENVR 134 Ecological Microbiology (3)
Prerequisite: One course in general microbiology. A description of microbial populations and communities, the environmental processes they influence, and how they can be controlled to the benefit of humans. Two lecture andthree laboratory hours per week. Spring. Pfaender.

ENVR 135 Biology in Environmental Science (3)
Prerequisite: General chemistry. An introduction to biology, including principles of biochemistry, cell structure, classification and ecology. Laboratory emphasizes techniques utilized in measurement and control of environmental pollution. Two lecture and two laboratory hours per week. Fall. Francisco.

ENVR 136 Biological Oceanography (4)
[BIOL 140, MASC 104] Prerequisites: BIOL 54 or BIOL 105 or permission of instructor. Physical, chemical and biological factors characterizing estuarine and marine environments emphasizing factors controlling plant and animal populations, including methods of analysis, sampling and identification. Five lecture and laboratory hours a week. Summer. Staff.

ENVR 137 Ecology of Wetlands (4)
[MASC 137] Prerequisites: One year in biology, one semester in ecology, one year in chemistry and permission of the instructor. An introduction to the functioning of freshwater and estuarine marsh and swamp ecosystems, with emphasis on the systems of the southeastern U.S. Fall. Staff.

ENVR 141 Air and Industrial Hygiene (3)
Not open to students who have received credit for ENVR 142. Problem definition, sources of information, health effects, legislative framework and control methods. Hazard recognition, evaluation and remediation approaches for community and industrial environments. Fall. Fox.

ENVR 142 Interdisciplinary Approaches to Occupational Health (2)
Permission of instructor required. Collaborative approach to investigate occupational health problems utilizing expertise of multidisciplines including: nursing, medicine, industrial hygiene and safety. Includes didactic sessions, work-site visits and a collaborative project. Two lecture hours per week. Fall. Staff.

ENVR 144 Industrial Toxicology (2)
Toxicological assessment of and a case presentation of related exposure is given. A conceptual approach is utilized to design appropriate programs to prevent worker ill health due to industrial toxicant exposure. Two lecture hours per week. Spring. Staff.

ENVR 145 Introduction to Aerosol Science (4)
Prerequisite: Admission to department or permission of the instructor. Physical and chemical principles underlying behavior of particles suspended in air. Topics include rectilinear and curvilinear motion of the particles in a force field, diffusion, evaporation and condensation, electrical and optical properties and particle coagulation, as well as the behavior of the cloud in toto. Three lecture and two laboratory hours a week. Fall. Reist, Leith.

ENVR 145L Aerosol Science Laboratory (2)
Pre- or corequisite: ENVR 145. Basic laboratory exercises in aerosol sciences. Fall. Reist, Leith.

ENVR 147 Occupational Safety (2)
Fundamentals of occupational safety with emphasis on legislation and organization of industrial safety programs including hazard recognition, analysis, control and motivational factors pertaining to industrial accident prevention. Fall. Staff.

ENVR 149 Health Hazards of Industrial Operation (3)
Prerequisite: ENVR 141. An introduction of the health hazards associated with the various unit operations of industry. Field trips to local industries are planned. Spring. Flynn.

ENVR 153 Environmental Management and Policy (3)
[PLAN 153, PUPA 153] Prerequisites: ENVR 51 or graduate standing. Intensive introduction to environmental management and policy, including environmental and health risks, policy institutions, processes and instruments, policy analysis and major elements of American environmental policy. Lectures and case studies. Three lecture hours per week. Fall. Andrews.

ENVR 158 Mathematical Methods of Environmental Modeling (3)
Prerequisite: Calculus. Mathematical basis of environmental models is reviewed, including an overview of axiomatic systems, differential equations, transforms, parameter estimation and numerical simulations. Three lecture hours per week. Fall. Crawford-Brown.

ENVR 159 Analytic Thought and Environmental Risk (3)
Permission of instructor required. The principles of logical analysis are developed and applied to environmental problems. Concepts such as evidence, inference and proof are formalized for calculations of environmental risk. Two lecture hours and one seminar hour per week. Spring. Crawford-Brown.

ENVR 163 Radiation Physics and Instrumentation (4)
Prerequisite: Calculus. Radioactive decay and the interaction of radiation with matter. Laboratory study of radiation measurements. Three lecture and three laboratory hours per week. Fall. Watson, Crawford-Brown.

ENVR 164 Field Observations in Radiological Hygiene (2)
Permission of instructor required. Field observations of health physics practices at nuclear fuel cycle facilities and government nuclear facilities. Field fee: $175. Spring. Watson.

ENVR 165 Advanced Radiological Laboratory (2)
Intensive radiological laboratory training at Oak Ridge Associated Universities. Tour of research facilities at Oak Ridge National Laboratory. Field fee: $200. Spring. Crawford-Brown.

ENVR 167 Introduction to Medical Physics (2)
Permission of the instructor required. The physics of radiation therapy, diagnostic radiology and nuclear medicine are introduced by practicing clinical physicists. Fall. Crawford-Brown, Chaney, Johnston, Washburn.

ENVR 168 Comprehensive Radiation Biology (3)
[ORDI 190] Prerequisite: BIOL 11. A survey of the biological effects of ionizing and non-ionizing radiations ranging from the molecular to the ecosystem level. Related topics such as the effects of nuclear war and food irradiation are also included. Fall, alternate years. Tyndall.

ENVR 171 Reactor and Mass Transport Principles (3)
Prerequisite: MATH 124 or equivalent. Application of chemical engineering fundamentals to describe physical, chemical and biological processes important for water/waste-water treatment, air pollution control, and processes in natural systems. Three lecture hours per week. Fall. DiGiano.

ENVR 174 Water and Wastes Treatment Processes (4)
Prerequisite: ENVR 122. Permission of instructor required. A study of unit processes for water and waste water treatment. Processes discussed include gas transfer, coagulation, disinfection, absorption, demineralization, sedimentation, filtration, aerobic and anaerobic biological treatment. Three lecture and two lab hours a week. Spring. Singer.

ENVR 176 Ground Water Engineering (3)
Prerequisites: MATH 31 and 32. Use of analytical solutions to define ground water movement and contaminant transport in subsurface environments. Three lecture hours a week. Fall. Miller.

ENVR 183 Special Topics in Water Resources (2)
Permission of instructor required. Interdisciplinary exploration of the principal issues involved in water resource planning, conservation, development and management. Includes the nature of water resources, principal water uses and conflicts, public objectives and policy issues, institutional arrangements, legal framework, planning and governmental agency programs. Spring. Staff.

ENVR 190 Reading in Environmental Health Sciences (1-6)
Permission of instructor required. Extensive library study of a specific subject in environmental health sciences. One to six seminar hours per week. Fall, spring and summer. Staff.

ENVR 191 Health and Ecological Effects of Environmental Agents (3)
Prerequisites: Basic biology, chemistry through organic, and math through calculus or permission of instructor. Interactions of environmental agents (chemicals, infectious organisms, radiation) with biological systems including humans, with particular attention to routes of entry, distribution, metabolism, elimination and mechanisms of adverse effects. Three lecture hours per week. Fall. Staff.

ENVR 192 Techniques in Environmental Health Sciences (1)
Prerequisites: Basic biology, chemistry through organic, and math through calculus or permission of instructor. A practical introduction to the measurement of biological end-points, emphasizing adverse effects of environmental agents and using laboratory and field techniques. Two laboratory hours per week. Fall. Staff.

ENVR 195 Environmental Health Microbiology (3)
Prerequisite: Introductory course in microbiology or permission of instructor. Presentation of the microbes of public health importance in water, food and air, including their detection, occurrence, transport and survival in the environment; epidemiology and risks from environmental exposure. Two lecture and two laboratory hours per week. Spring, alternate years. Sobsey.

ENVR 198 Biophysical Theory of Environmental Health (3)
The biophysical basis of models of intake, metabolism, transfor-

mation and effects of environmental pollutants in organisms is developed. Evidence supporting the axiomatic structures is reviewed. Three lecture hours per week. Fall. Crawford-Brown.

ENVR 200 Problems in Environmental Sciences and Engineering (1-9)
Departmental permission required. For students outside the department who desire to undertake individual study of a specific problem in environmental sciences and engineering. The subject and requirements of the project are arranged with the faculty in each individual instance. Two or more hours a week. Fall, spring and summer. Staff.

ENVR 210 Environmental Policy Seminar (1)
Current issues in environmental policy research and practice, presented by faculty, advanced students and guest speakers. Two seminar hours per week. Fall and spring. Staff.

ENVR 211 Methods in Environmental Management (3)
The strategies and techniques used in the management of environmental protection programs. Safety evaluations, regulatory processes, institutional arrangements and organization responses. Fall. Staff.

ENVR 212 Administration of Environmental Protection Programs (3)
Organization and operation of environmental protection programs to include administrative processes, program analysis, performance evaluation and project management methods. Spring. Staff.

ENVR 217 Systems Analysis in Environmental Planning (3)
Prerequisite: Calculus. Systems approach and scientific method. Various approaches to system design. Mathematical models. Production, benefit, loss and cost functions. Constrained optimization. Marginal analysis. Linear programming. Application of techniques to systems for the management of environmental quality. Fall. Staff.

ENVR 219 Water Policy in Lesser Developed Countries (3)
[PLAN 219] Permission of instructor required. Seminar on policy and planning approaches for providing improved community water and sanitation services in developing countries. Topics covered include the choice of appropriate technology and level of service; pricing, metering, and connection charges; cost recovery and targeting subsidies to the poor; water vending; community participation in the management and operation of water systems; and rent-seeking behavior in the provision of water supplies. Three seminar hours per week. Spring. Whittington.

ENVR 221 Instrumental Methods of Analysis (3)
Prerequisites: Inorganic and analytical chemistry and permission of instructor. Principles and techniques of instrumental chemical analysis including optical, electrical and separation methods. Laboratory sessions include adsorption, spectrophotometry, potentiometry, amperometry, gas chromatography, GC-mass spectrometry. Two lecture and four laboratory hours a week. Spring. Shuman.

ENVR 222 Special Topics in Environmental Chemistry (1-3)
Permission of instructor required. Current topics in aquatic and atmospheric chemistry. One to three lecture hours per week. Fall and spring. Staff.

ENVR 225 Analysis of Trace Organics (3)
Prerequisites: CHEM 61-62, CHEM 181-182 and PHYS 24-25. Permission of instructor required if prerequisites not met. Basic principles of isolation, separation and identification of trace organic chemicals in environmental and/or biological samples including solvent extraction, liquid and gas chromatography and mass spectrometry. Spring. Hass, Albro.

ENVR 231A Limnological Methods (2)
Prerequisites: Basic limnology and statistics; must register for 231B in the second session. Professional preparation for field study of freshwater aquatic systems. Two lecture and 10 laboratory hours a week. First summer session. Francisco.

ENVR 231B Limnological Methods (2)
Prerequisite: ENVR 231A. Second summer session. Francisco.

ENVR 232 Special Topics in Environmental Biology (1-3)
Permission of instructor required. Current topics in aquatic biology and ecology. One to three lecture hours per week. Fall and spring. Staff.

ENVR 238 Microbial Degradation of Xenobiotics (3)
Prerequisites: ENVR 122 and 134 or an undergraduate course in microbiology. Presents and unifies emerging bodies of knowledge in microbial ecology, physiology and genetics and integrates them into discussions of chemical degradation in natural and engineered systems. Three lecture hours per week. Fall of even-numbered years. Aitken, Pfaender.

ENVR 241 Industrial Ventilation Design (3)
Prerequisites: Engineering degree and permission of instructor. Corequisite: ENVR 241L. Engineering design of industrial exhaust systems and control of heat exposures in occupied spaces. Fall. Staff.

ENVR 241L Industrial Ventilation Laboratory (1)
Corequisite: ENVR 241. Basic laboratory exercises in aerosol sciences. Fall. Staff.

ENVR 242 Theory and Practice of Exposure Evaluation (3)
Prerequisites: ENVR 143 and 145. Methodology and philosophy of evaluating exposures to air contaminants in the workplace.

Course is divided into lectures, case-study analyses and hands-on term project. Spring. Todd.

ENVR 243 Instrumentation and Data Acquisition (3)
Permission of instructor required. Concepts and principles employed in electronic-aided measurements of air quality including acquisition of measurements, principles of input transaction and on-line minicomputers. Fall. Jeffries.

ENVR 244 Industrial Hygiene Laboratory (3)
Prerequisite: ENVR 145. Corequisite: ENVR 242. Physical and chemical techniques for measuring industrial exposures. Practical experiments illustrate techniques applicable to the industrial hygiene survey. One lecture and four laboratory hours a week. Spring. Reist.

ENVR 245 Air Pollution Control (3)
Prerequisite: ENVR 141. Engineering control of air pollution control systems and discussion of air pollution regulation and standards. Spring. Staff.

ENVR 246 Advanced Methods of Exposure Assessment (3)
Prerequisites: BIOS 135, ENVR 191 (or equivalent). Pre- or corequisite: BIOS 145. Permission of instructor required for non-ENVR majors. Covers the statistical and biological considerations in assessing environmental exposures to chemicals with particular attention to airborne chemicals in occupational settings. Spring, alternate years. Rappaport.

ENVR 248 Industrial Medicine — Practice and Management (3)
Prerequisite: ENVR 191 or equivalent. The technical factors to be considered in decision-making and the roles and responsibilities of the industrial physician, nurse and industrial hygienist in the management of the work force. The etiology, diagnosis, treatment and prevention of diseases and stresses found in modern industry are discussed with applications for the use of general practitioners, health administrators, public health nurses and industrial professionals. Spring. Staff.

ENVR 252 Environmental Risk Assessment (3)
Permission of instructor required. The characterization of population exposures and the evidence used to identify environmental substances that may pose a human health risk. The theory and methods for quantitatively estimating risk. Spring. Turner.

ENVR 253 Environmental Policy Analysis (3)
[PLAN 253, PUPA 253] Prerequisite: ENVR 153. Advanced topics and applications in environmental policy analysis. Three lecture hours per week. Fall. Andrews.

ENVR 254 Food Safety Policy (3)
Food safety will be discussed in respect to the development and implementation of policy, food legislation, regulation and other components of food safety programs. Three lecture hours a week. Spring. Staff.

ENVR 255 Management of Hazardous Waste (3)
Prerequisite: CHEM 61 or equivalent. The classification, chemistry and toxicology of hazardous wastes will be presented. Control technologies, regulatory policies and management strategies are examined. Fall. Turner.

ENVR 257 Current Applications in Environmental Management (4)
Interdisciplinary group project. Analysis of a current environmental management problem. Topic changes each year. Three lecture and one laboratory hour per week. Spring. Amaral.

ENVR 258 Analysis for Risk Management (3)
[POLI 208] Quantitative techniques for the analysis of environmental decisions, including application of modeling and sensitivity analysis, probability, value of information. The course also explores risk attitudes and conflicting objectives. Fall. Amaral.

ENVR 258L Risk Management Lab (1)
[POLI 208L] Corequisite: ENVR 258. Students use computer packages to analyze risk-management decision problems in environmental policy. Fall. Amaral.

ENVR 263 Radiation Hazards Evaluation I (3)
Prerequisite: Calculus. The physics of ionizing radiations and the principles of radiation dosimetry, hazards evaluation and protection are presented. Three lecture hours per week. Spring. Watson.

ENVR 264 Radiation Hazards Evaluation II (3)
Prerequisite: ENVR 263. Internal and external hazards of ionizing radiation are evaluated. Problems in hazards evaluation and radiation protection of types included in certification examinations of the American Board of Health Physics are studied. Three lecture hours per week. Fall. Watson.

ENVR 267 Medical Physics Rotation (3)
Students will spend nine hours per week in detailed discussion and application of specialized topics of medical physics within the Radiology Department. Time will be spent in therapy, diagnosis and imaging. Spring. Crawford-Brown, Chaney and Washburn.

ENVR 271 Engineering Modeling of Aquatic Systems (3)
Permission of instructor required. Examination of selected physical, chemical and biological phenomena in natural aquatic systems. Use of mathematical models for water quality prediction and control. Spring, alternate years with ENVR 272. Lauria.

ENVR 272 Design of Water Systems (3)
Permission of instructor required. Use of mathematical models and computer programs for designing water systems, including pumping stations, reservoirs, water distribution and waste-water collection networks. Spring, alternate years with ENVR 271. Lauria.

ENVR 273 Water and Wastewater Treatment Plant Design (3)
Prerequisite: ENVR 174. The application of the theory of water and waste-water treatment to the design of municipal treatment facilities. The course includes the principles of design and modern design practices. The seminar is devoted to the design and analysis of design of specific works for water and waste-water treatment. Summer. Briscoe.

ENVR 274 Physical/Chemical Treatment Processes (2)
Prerequisites: ENVR 122 or equivalent; ENVR 171 or equivalent. Fundamental descriptions of coagulation, precipitation, sedimentation, filtration, adsorption, ion exchange and membrane processes; applications to water and waste-water treatment. Two lecture hours per week. Spring. DiGiano.

ENVR 275 Biological Treatment Processes (2)
Prerequisite: ENVR 171 or equivalent. Theory and practice of biological processes used for conventional and advanced treatment of waste-water. Two lecture hours per week. Spring. Aitken.

ENVR 276 Industrial Waste Treatment (3)
Prerequisites: ENVR 122, 274. Permission of instructor required. Principles and practice of removing pollutants from industrial wastes by physical, chemical, biological and thermal processes. Students visit industrial facilities and prepare oral and written reports on waste generation and management. Three lecture hours per week. Fall of odd-numbered years. Aitken.

ENVR 277 Treatment Process Laboratory (2)
Corequisites: ENVR 274, 275. Demonstration of physical, chemical and biological principles and their application to water and waste-water treatment through bench- and pilot-scale laboratory exercises. Four laboratory hours per week. Spring. Singer.

ENVR 278 Stochastic Hydrology (3)
Prerequisite: BIOS 135 or equivalent. Stochastic modeling. Hydrologic processes (spatial, temporal, spatiotemporal). Correlation and spectral analyses. Generalized uni- and multivariate study of surface processes: flow simulation, flood forecasting, rainfall-runoff processes. Filters (Kalman, Factorable). Networks. Geostatistics. Spring. Christakos.

ENVR 279 Random Field Modeling of Physical Processes (3)
Prerequisite: BIOS 135 or equivalent; calculus through differential equations is desirable. Science of the probable. Random fields. Physical significance and methodological theses. Spatial and spatio temporal variability. Ordinary and generalized fields of natural processes. Transport-type models. Bayesian/Maximum entropy estimation. Three lecture hours per week. Fall. Christakos.

ENVR 281 Modeling Ground Water Systems (3)
Permission of instructor required. Numerical modeling methods for solving the partial differential equations governing mass, momentum and energy in ground water. Spring. Miller.

ENVR 282 Public Investment Theory and Techniques (3)
[PLAN 232] Theory and techniques of public investment planning and benefit cost analysis involving syntheses of economic, political and technologic aspects. Special focus on project and program evaluation in the Third World. Spring. Whittington.

ENVR 283 Natural Resource Law and Policy (3)
[PLAN 233] Permission of instructor required. An examination of the law of resource use and development, its administration and underlying policies. Particular attention to water rights law, regulatory law, and natural resource administration. Regulatory aspects of pollution control programs will be covered. Fall. Heath.

ENVR 284 Water Resources Planning and Policy Analysis (3)
[PLAN 234] Permission of instructor required. Introduction to water resources planning and management. Emphasis on federal and state water resources policies and the development of analytical skills for identification of environmental problems associated with urban water resources development. Fall. Moreau.

ENVR 291 Principles of Chemical Carcinogenesis (2)
Prerequisite: ENVR 190 or equivalent. Bioactivation of carcinogens, interaction of activated metabolites with DNA, and their effects on DNA structure, replication, repair and the control of these processes during development of chemically induced carcinogenesis. Two lecture hours per week. Spring. Gold.

ENVR 292 Molecular Approaches to Environmental Toxicology (3)
Prerequisites: ENVR 190 or equivalent or permission of the instructor. Recent advances in molecular biology applied to elucidation of problems in environmental toxicology with illustrations from the current literature. Three lecture hours per week. Spring. Ball.

ENVR 295 Environmental Virology (4)
Prerequisites: Introductory course in microbiology or permission of instructor. Ecological, environmental health and fundamental aspects of virology, with special emphasis on viruses in water,

food and air. Three lecture and two laboratory hours per week. Spring, alternate years. Sobsey.

ENVR 300 Research in Environmental Sciences and Engineering (2 or more)
Prerequisite: Consultation with the faculty and approval of subject and proposed program. Research in environmental sciences and engineering for students outside the department. Four or more hours a week. Fall, spring and summer. Staff.

ENVR 301 Seminar in Environmental Sciences and Engineering (1 or more)
Readings and discussions to provide opportunity to develop new concepts and topics in various aspects of environmental sciences and engineering. Fall, spring and summer. Staff.

ENVR 311 Seminar in Radiological Hygiene (1)
Permission of instructor required. Reports on current research and recent advances concerned with radiological hygiene. Two seminar hours per week. Fall. Watson.

ENVR 314 Seminar on Current Industrial Hygiene Issues (1)
Corequisite: ENVR 242. Permission of instructor required. Discussion on current topics affecting the field of industrial hygiene. Two seminar hours per week. Spring. Reist.

ENVR 320 Research in Environmental Chemistry (1-9)
Prerequisite: consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Christman, Shuman, Singer, Millington.

ENVR 321 Reduction/Oxidation Processes in the Aquatic Environment (1)
Redox processes in the aquatic environment; thermodynamics and kinetics; applications related to oxidation of natural and anthropogenic organics. One lecture hour per week. Spring. Glaze.

ENVR 322 Photochemical Processes in the Aquatic Environment (1)
Prerequisite: Physical chemistry. Photochemical processes in aquatic systems; formation of reactive intermediates and the transformation of natural and anthropogenic organics. One lecture hour per week. Spring. Glaze.

ENVR 323 Advanced Oxidation Processes for Water and Wastewater Treatment (1)
Prerequisite: Physical chemistry. Oxidation processes for treatment of natural and anthropogenic organics, using ozone peroxides, and UV radiation. One lecture hour per week. Spring. Glaze.

ENVR 324 Chemistry of Humic Substances (1)
Prerequisite: ENVR 121 or 133. Humic substances in nature; their formation, properties and methods of isolation. Role of degradation studies in structure determination. One lecture hour per week. Fall. Christman.

ENVR 325 Trace Elements: Geochemistry and Environmental Issues (1)
Prerequisites: Four semesters of undergraduate chemistry and permission of the instructor. Geochemical cycles and processes of selected trace elements such as Pb, Hg, Sn, As, Se, Cd. Health, regulatory and analytical issues. Term paper. One lecture hour per week. On request. Shuman.

ENVR 326 Advanced Techniques in Mass Spectrometry (1)
Prerequisites: ENVR 225 and permission of the instructor. Theory and environmental applications of mass spectrometric techniques including high-resolution mass spectrometry, mass spectrometry/mass spectrometry and alternate modes of ionization. One lecture per hour per week. On request. Charles, Hass.

ENVR 327 Projects in Mass Spectrometry (1)
Prerequisites: ENVR 225 and permission of the instructor. Experiments in mass spectrometry for advanced students. Two laboratory hours per week. On request. Charles, Hass.

ENVR 330 Research in Environmental Biology (1-9)
Prerequisite: Consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Pfaender, Sobsey, Francisco.

ENVR 333 Seminar in Aquatic and Atmospheric Sciences (1-3)
Prerequisites: ENVR 121 or ENVR 135. Advanced topics seminar in aquatic and atmospheric sciences. One to three seminar hours per week. Fall and spring. Staff.

ENVR 334 Environmental Microbiology Methods (1)
Prerequisite: General microbiology or ENVR 134. Microbiological analytical methods that can be used in environmental setting. Methods for assessing numbers, biomass, metabolic activity and genetics. One lecture hour per week. On request. Pfaender.

ENVR 337 Estuarine Ecology (1)
Prerequisites: ENVR 135 or permission of the instructor. Advanced estaurine ecology emphasizing transport, processing and fate of natural and anthropogenic materials in waters, sediments and biota. One lecture hour per week. On request. Staff.

ENVR 340 Research in Air and Industrial Hygiene (1-9)
Prerequisite: Consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Fox, Jeffries, Reist, Gold, Hickey, Leith, Kamens.

ENVR 341 Engineering Research in Air and Industrial Hygiene (1-9)
Prerequisite: Consultation with the faculty and approval of the subject and proposed program. Fall, spring and summer. Fox, Jeffries, Reist, Hickey.

ENVR 350 Research in Environmental Management and Protection (1-9)
Prerequisite: Consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Christman, Turner, Gold, Andrews.

ENVR 360 Research in Radiological Hygiene (1-9)
Prerequisite: consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Watson, Crawford-Brown.

ENVR 361 Atmospheric Solar Radiation (1)
Prerequisites: ENVR 133 or 121. Solar radiation transfer, surface irradiance and actinic flux, atmospheric photolysis rates of chemical species, Broadband and spectral solar radiation measurement and simple numerical models of radiation transfer. One lecture hour per week. Spring. Jeffries.

ENVR 362 Urban and Regional Atmospheric Chemistry (2)
Prerequisite: ENVR 121. Explicit atmospheric chemistry of volatile organic carbon, oxides of nitrogen, and oxides of sulfur. Formulation and testing of condensed photochemical reaction mechanisms for use in air quality models. Two lecture hours per week. Fall. Jeffries.

ENVR 363 Global Atmospheric Chemistry (1)
Prerequisites: ENVR 121, 362. Photochemical processes in the global atmosphere. One lecture hour per week. Fall. Staff.

ENVR 364 Measurement of Ozone and Oxides of Nitrogen in Air (1)
Prerequisites: ENVR 121 or ENVR 141. Calibration and measurement of ozone and oxides of nitrogen using research instruments. One laboratory hour per week. On request. Jeffries.

ENVR 365 Measurements of Volatile Organic Compounds in Air (1)
Prerequisite: ENVR 121 or ENVR 141. Calibration and measurement of volatile organic compounds using research instruments. One laboratory hour per week. On request. Jeffries.

ENVR 366 Measurement of Gas-Particle Interactions (1-3)
Prerequisite: ENVR 141 or physical chemistry. Organic and inorganic reactions of gas and particle interactions; polycyclic aromatic hydrocarbons on soot particles; acid aerosols; laboratory projects using chambers and associated instrumentation. One lecture and one laboratory hour per week. Spring. Kamens.

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ENVR 367 Development of Atmospheric Chemistry Models (1)
Prerequisite: ENVR 121. Formulation of computer codes for simulating atmospheric chemistry. One lecture hour per week. On request. Jeffries.

ENVR 368 Operation of Urban Airshed Models (1)
Prerequisites: ENVR 121, ENVR 367. Application of an urban-scale three-dimensional transport and chemical reaction model to photochemical oxidant problems. One lecture hour per week. On request. Jeffries.

ENVR 369 Air Pollution Regulatory Policy Issues (1)
Prerequisites: ENVR 121, ENVR 362. Role of atmospheric science in the formulation of the Clean Air Act and EPA oxidant regulatory policies. One lecture hour per week. On request. Fox, Jeffries.

ENVR 370 Investigations in Water Resources Engineering (1-9)
Prerequisite: Consultation with the faculty and approval of subject and proposed program. Fall, spring and summer. Lauria, Okun, Briscoe, DiGiano, Singer.

ENVR 390 Research in Environmental Health Sciences (1-9)
Prerequisites: Consultation with the faculty and approval of subject and proposal program. May be repeated. Hours and credits to be arranged. One to nine laboratory hours per week. Fall, spring and summer. Staff.

ENVR 391 Seminar in Environmental Health Sciences (1)
Permission of instructor required for students outside program area. Discussions and surveys on current critical issues in environmental health sciences. On request. Staff.

ENVR 392 Master's Technical Report (1-9)
The technical report requirement for MSPH, MPH, and MSEE candidates is satisfied by the extensive study of a problem in environmental sciences and engineering. Study may extend over one or more semesters and credit is assigned accordingly.

ENVR 393 Master's Thesis (1-9)

ENVR 394 Doctoral Dissertation (3-9)

ENVR 400 General Registration (0)

Epidemiology

Chair
Barbara S. Hulka[1]
Kenan Professor

Registrar
Joyce Allen
Telephone # (919) 966-7458

Professors
Hilton T. Goulson
Gerardo Heiss
Michel A. Ibrahim, *Dean*
Berton H. Kaplan
David G. Kleinbaum[2]
Lenore Kohlmeier
John R. Seed
Carl M. Shy
Herman A. Tyroler,
Alumni Distinguished Professor

Professor Emeritus
Cecil G. Sheps

Clinical Professors
Gordon H. DeFriese
Curtis G. Hames
Ronald J. Hunt
David F. Ransohoff
David S. Sheps
Edward H. Wagner

Adjunct Professors
James C. Barrett
James D. Beck
Dan German Blazer
Joan Cornoni-Huntley
Richard B. Everson
Robert H. Fletcher
Suzanne W. Fletcher
Jean G. French
Jack D. Griffith
Harry A. Guess
Carl G. Hayes
Siegfried H. Heyden
Sherman A. James
Ulrich Keil
Ruth E. Little
J. Newton MacCormack
Melinda S. Meade
George R. Parkerson, Jr.
John W. Stamm
Hugh H. Tilson
James F. Toole
Allen J. Wilcox
Redford B. Williams

Associate Professors
Ralph S. Baric
James E. Hall
Edison T. Liu[3]
David A. Savitz
Victor J. Schoenbach
Lola V. Stamm
David J. Weber

Associate Professor Emeritus
M. Caroline Becker

Clinical Associate Professors
Brian A. Boehlecke
Desmond K. Runyan
Robert S. Sandler
Philip D. Sloane
Mark E. Williams

Adjunct Associate Professors
Naomar Almeida-Filho
Dragana A. Andjelkovich
John C. Barefoot
John R. Crouse
Judith A. Fortney
Raymond S. Greenberg[4]
Michael D. Hogan
Debra E. Irwin
William F. McDonnell, III
Wilbur K. Milhous
Miquel S. Porta
Walter J. Rogan
Michael J. Rosenberg
Carol W. Runyan
Dale Sandler
Ilene C. Siegler
David S. Strogatz
Jane A. Weintraub

Assistant Professors
Irva Hertz-Picciotto
Dana P. Loomis
Beth M. Newman
Andrew F. Olshan
Wayne D. Rosamond
Rachel A. Royce
James C. Thomas
Marilyn F. Vine
Kristen A. Weigle
Steven B. Wing

Research Assistant Professors
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Lester W. Lee
Christine L. Moe

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Elizabeth B. Andrews
Donna D. Baird
Richard A. Berzon
Jeffrey A. Boyd
W. Eugene Broadhead
J. Trig Brown
Dennis A. Clements, III
Thomas B. Cole
Gwen W. Collman
Frank V. Crout
Deborah Dawson
Joanne M. Garrett
Peter A. Garrett
Russell P. Harris
Nancy S. Hunter
Eric S. Johnson
Lorraine B. Johnson
Eugene J. Lengerich
Peter A. Margolis
Margaret F. McCann
Dexter L. Morris
Gregory P. Samsa
C. Gregory Smith
David C. Sokal
Paul E. Stang
Patricia S. Tennis
Christine A. Uhlinger
Hetty A. Waskin
Alice D. White

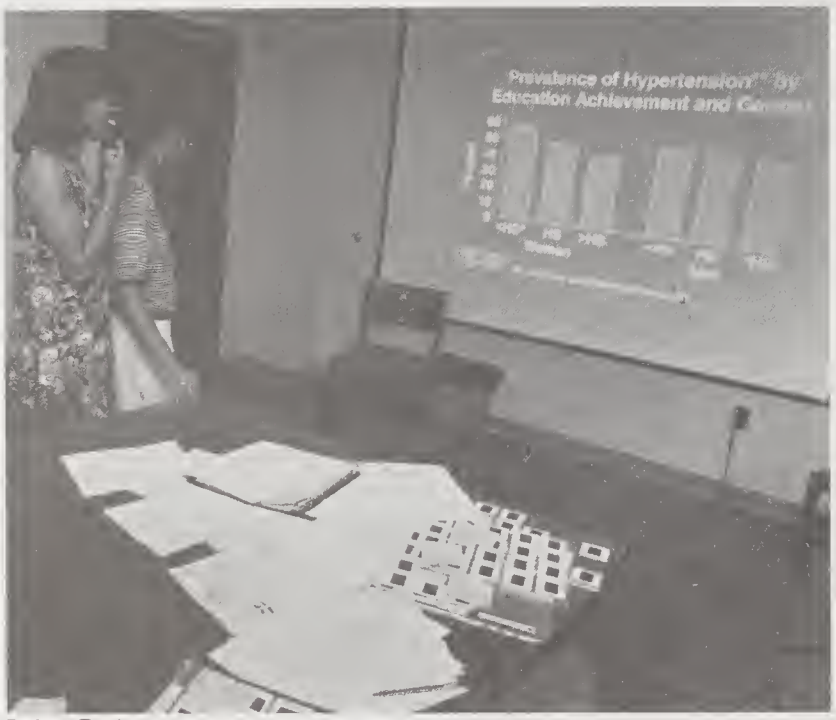
[1] Resigned as chair effective July 1, 1993
[2] Resigned May 31, 1993
[3] Associate Professor as of July 1, 1993
[4] Adjunct Professor as of July 1, 1993

Epidemiology

The Department of Epidemiology offers research training in a number of specialized areas including chronic diseases, infectious diseases, environmental/ occupational exposures, reproductive issues and health care. The study program includes courses, seminars and tutorials designed to help the student develop research and teaching skills in epidemiology. Degrees offered by the department include the Master of Public Health (MPH), Master of Science in Public Health (MSPH), Doctor of Philosophy (PhD) and Doctor of Public Health (DrPH).

Students wishing to enroll in the program should have a background in the biological sciences or in the behavioral sciences with supporting courses in the biological sciences. They should have strong mathematical preparation and should demonstrate a clear research commitment.

The MPH degree program is a course of study designed for persons with terminal professional degrees in the biomedical or behavioral sciences. Students are trained for professional public health practice or for teaching positions, usually in schools of medicine. The MSPH is designed for students who do not have a relevant advanced degree and who plan to proceed into the PhD program.



Barbara Tyroler

Both masters' programs require a minimum of 30 semester hours of credit, although most students complete additional credit hours. Requirements include the School core courses described on pages 14–16 (for the MPH) and pages 16–18 (for the MSPH). In addition to this core, students in both programs complete a sequence of methods courses and one or more substantive courses in epidemiology. Other coursework may be determined with the advisor to meet the needs of the individual student. All master's candidates must complete a comprehensive written examination and a master's paper and present their research in a seminar.

Masters' programs are ordinarily two years. In some cases MPH students may complete the course-work portion in 12 to 18 months.

The PhD is the most common doctoral program in epidemiology. The doctorate prepares the student for a research/teaching career, most often in a university, federal or state agency or private research institution. The Graduate School residency requirements must be met, with at least three semester hours of credit for the dissertation (EPID 394). In addition, a sequence of methods courses and two or more substantive courses in epidemiology are required. Students in the DrPH program must fulfill the School of Public Health course requirements given on pages 19–22 in addition to the departmental requirements. Other coursework is planned to meet the needs of the individual student. Much of the work is in the form of association with individual faculty members, leading to achievement of a set of skills and competencies enabling the student to function comfortably in the field.

Preliminary doctoral examinations include both written and oral components. The doctoral dissertation involves an original research problem and is expected to be of high quality, demonstrating a sophisticated level of skill. Doctoral programs average three to four years following the master's or professional degree.

The Department of Epidemiology maintains strong relationships with other departments and schools of the University. Since the program of study is designed around the unique interests of the individual student and the requirements of the research project, students are encouraged to make extensive use of the resources of the University and the research community. Students take courses in other departments and curricula within the School of Public Health as well as in other divisions.

EPID 140, 141 Problems in Epidemiology (1 or more)
A course for students who wish to make an intensive study of some special problems in epidemiology. Fall, spring and summer. Staff.

EPID 160 Principles of Epidemiology (3)
Pre- or Corequisite: Introductory biostatistics. An introductory course that considers the meaning and scope of epidemiology and the uses of morbidity, mortality and other vital statistics data in the scientific appraisal of community health. Three lecture hours a week. Fall. Wing.

EPID 168 Fundamentals of Epidemiology (4)
Permission of instructor required for non-majors. An intensive introduction to epidemiologic concepts and methods for students intending to engage in, collaborate in or interpret the results of epidemiologic studies. Some familiarity with biomedical concepts may be needed. An alternate to EPID 160 for satisfying the SPH core requirements. Three lecture and two seminar hours a week. Fall. Schoenbach, Hulka.

EPID 201 Epidemiologic Research Methods (3)
Prerequisites: EPID 168; introductory biostatistics. Permission of instructor required. A second-level course on conduct of epidemiologic research. Focuses on dealing with both conceptual problems of applying the scientific method and practical issues encountered in carrying out the work. Three lecture hours a week. Spring. Harris, Savitz, Thomas.

EPID 203 Data Analysis in Oral Epidemiology (2-3)
Prerequisite: Basis knowledge of SAS. Permission of instructor required. Data analysis project in oral epidemiology: data cleanup, file construction, analysis. For three credit hours the student also completes multivariate analysis with linear, logistic regression. Project to result in publishable paper. Fall. Hunt.

EPID 205 Clinical Epidemiology and Clinical Research Methods (6)
Permission of instructor required. Intense interdisciplinary approach to clinical research intended primarily for physicians committed to clinical investigation. Epidemiologic, social science and decision-analytic methods; medical ethics, health policy, health economics, medical-care epidemiology. Five lecture and two seminar hours a week. Fall. DeFriese.

EPID 206 Clinical Research Skills (4)
Permission of instructor required. Practical research skills for clinical investigators including grant application, instrument development, project management, data management, data analysis and the communication of research results. Four lecture hours a week. Spring. Ransohoff.

EPID 212 Epidemiology of Medical Care (3)
Prerequisites: EPID 160 or 168. Epidemiology applied to issues in health care; variations in disease and medical care, quality of care measures, role of health care in determination of trends, epidemiological approaches in planning/policy. Three lecture hours a week. Fall. DeFriese.

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EPID 214 Research on Aging Populations (3)
Prerequisites: Introductory epidemiology and biostatistics. Methodologic and content issues in research on aging including measurement of physical and mental functions, subject recruitment and selection, selective survival, attrition, co-morbidity, etc. Evaluation and discussion of clinical topics. Three lecture hours a week. Spring. Sloane.

EPID 215 Public Health Microbiology (4)
Overview of basic principles of infectious diseases focusing on human pathogens of public health importance. Includes a general introduction to the biology of viruses, bacteria and eucaryotic parasites. Four lecture hours a week. Spring. Seed, Baric, Hall, Stamm.

EPID 218 Introduction to Methods in Infectious Disease Epidemiology (3)
Prerequisites: Introductory epidemiology and biostatistics. Introduction to infectious disease epidemiology. Course will focus on methodology, public health concerns, patterns of transmission and newly discovered infections. Will focus on diseases in developed countries, especially the U.S.. Three lecture hours a week. Fall. Weber, Weigle, Thomas.

EPID 219 Reproductive Epidemiology (3)
Prerequisites: EPID 160 and BIOS 110 or alternatives. Permission of instructor required. Epidemiology of major reproductive health outcomes, including infertility, fetal loss, birth weight, congenital malformations, infant mortality. Current knowledge regarding epidemiology of these outcomes. Discussion of methodologic issues specific to reproduction. Fall. Savitz.

EPID 220 Health Promotion/Disease Prevention and Behavioral Epidemiology (3)
Prerequisite: EPID 168 or permission of instructor. Selected topics on the role of lifestyle behavior in modern illness and on conceptual, methodologic, substantive and policy issues in health promotion/disease prevention. Three lecture hours a week. Spring. Schoenbach, Kaplan.

EPID 222 Epidemiology of Immunizations (3)
Prerequisites: EPID 160 or equivalent. This course will explore the application of epidemiological methods to immunization practices. Topics will include vaccine development, vaccine efficacy, post-licensing evaluation, vaccine coverage and cost/benefit analysis. Three lecture hours a week. Spring. Weigle, Weber.

EPID 223 Biochemical Epidemiology (3)
Prerequisites: Introductory epidemiology and biostatistics. Introduction to the use of biochemical markers in epidemiologic research. Emphasis will be placed on markers of genotoxicity such as chromosomal aberrations, sister chromatid exchanges, micronuclei and DNA adducts. Three lecture hours a week. Fall. Vine.

EPID 224 Methods in the Study and Control of Sexually Transmitted Diseases (3)
Prerequisites: EPID 160 or equivalent. Course aims to familiarize students with current knowledge of epidemiology of sexually transmitted diseases and how to study these diseases. Extensive discussion of issues in the control of STDs. Three lecture hours a week. Spring. Thomas, Waskin.

EPID 225 Clinical Trials in Epidemiology (3)
Prerequisites: Introductory epidemiology; introductory biostatistics. Systematic overview of principles in design, implementation and analysis of clinical trials. Emphasis on applications in chronic disease epidemiology. In-depth discussion of case examples from cardiovascular disease epidemiology emphasized. Three lecture hours a week. Spring. Tyroler, Davis.

EPID 226 Control of Infectious Diseases in Developing Countries (1-3)
Prerequisites: EPID 160 or 168. Orientation to control and study of infectious diseases in developing countries. Principles of planning, conduct, evaluation of field studies/projects; emphasis on infectious diarrheal diseases, vector-borne infections, parasitic diseases. One lecture hour and two to four seminar hours a week. Spring, alternate years. Weigle.

EPID 227 Women's Health: A Life Cycle Perspective (2)
[MHCH 227] Permision of instructor required for non-majors. Survey of the sources and causes of morbidity and mortality among women from birth to extreme old age. A goal is to highlight subject areas historically under-researched and under-serviced. Fall. Zapata, Newman.

EPID 229 Genetic Epidemiology: Methods and Applications (3)
Prerequisites: Introductory epidemiology and biostatistics and course in human genetics or permission of instructor. Concepts and methods of genetic epidemiology relevant to the study of complex human diseases including research on twins, familial aggregations, path analysis, segregation analysis, linkage analysis and gene-environment interaction. Three lecture hours a week. Spring. Newman.

EPID 232 Methods and Issues in Pharmacoepidemiology (3)
Prerequisites: Introductory epidemiology and biostatistics. Permission of instructor required. Application of the epidemiologic knowledge, methodology and reasoning to the study of the effects (beneficial and adverse) and uses of drugs in human populations. Fall. Guess.

EPID 233 Cancer Epidemiology and Pathogenesis (3)
Prerequisites: EPID 168 or equivalent; BIOS 110; undergraduate major or strong preparation in the biological sciences. Permission of instructor required for non-majors. Emphasis on integration of epidemiologic data with laboratory and clinical research findings. Issues in epidemiologic research design, analysis and interpretation are presented within the context of substantive epidemiology. Three lecture hours a week. Spring. Hulka.

EPID 249 Genetics of Common Diseases (3)
[GNET 249] Prerequisites: BIOS 150; GNET 122 or EPID 160 or permission of instructor. Critical analysis of genetic issues in human disease. The genetics of cancer, heart disease, diabetes, mental illness, mental retardation, hypertension and arthritis will be covered. The application of genetic and epidemiological techniques will be examined. Spring, alternate years. Staff.

EPID 256 Cardiovascular Disease Epidemiology (3)
Pre- or Corequisites: EPID 160 and BIOS 110 or their equivalents. Review of major issues in cardiovascular disease epidemiology, summarization of relevant pathology and analogies of population

determinants and strategies for prevention. Three lecture hours a week. Fall. Heiss, Tyroler, Davis.

EPID 257 Teaching Experience in Epidemiology (1-4)
Prerequisite: EPID major, second year or above. Provides Epidemiology majors with supervised experience in teaching and course preparation. Students act as assistants in departmental courses. Two to eight seminar hours a week. Fall and spring. Staff.

EPID 264 Sociocultural Environment and Health (3)
Prerequisites: EPID 160 or equivalent, basic social science background. Permission of instructor required. Selected topics on social and cultural factors in health and illness. Three lecture hours a week. Spring. Kaplan.

EPID 266 Epidemiologic Investigation (3)
Prerequisites: EPID 160, EPID 256 and BIOS 110, or their equivalents. Permission of instructor required. Second-level course in epidemiologic research/investigation of current issues in cardiovascular disease. Epidemiologic study design, analysis and interpretation are applied in implementing a research project. Current data files available. Three lecture hours a week. Spring. Heiss, Davis, Tyroler.

EPID 268 Theory and Quantitative Methods in Epidemiology (4)
Prerequisites: EPID 168 and BIOS 145. Permission of instructor required. An in-depth treatment of key methodological topics in epidemiology, including concepts of cause confounding and its control subject selection, data quality, sampling variability and effect modification. Three lecture and two laboratory hours a week. Fall. Savitz, Loomis.

EPID 269 Advanced Methods for Epidemiologic Data Analysis (3)
Prerequisite: EPID 268. Permission of instructor required for non-majors. Concepts and applications, including historic overview, logistic regression, survival analysis, model building strategy, additive and multiplicative interaction, meta-analysis, and graphical exploration. Includes computer-based experience with real data. Two lecture and four lab hours a week. Spring. Hertz-Picciotto.

EPID 276 Occupational Epidemiology (3)
Prerequisites: Introductory epidemiology and biostatistics. This course investigates applications of the principles and methods of epidemiology to the identification and evaluation of occupational health hazards, with special emphasis on cohort and case-control studies. Three lecture hours a week. Spring. Shy.

EPID 277 Environmental Epidemiology (3)
Prerequisites: Introductory epidemiology and biostatistics. This course investigates applications of the principles and methods of epidemiology to the human, health consequences of environmental hazards and considers the uses of epidemiology in establishing protective measures. Fall. Shy.

EPID 301 Pharmacoepidemiology Seminar (1)
Prerequisites: Basic knowledge of epidemiology and biostatistics. This is a weekly seminar to explore current problems in pharmacoepidemiology. It supplements the introductory course Epidemiology 232. May be repeated. Two seminar hours a week. Fall. Guess.

EPID 302 Infectious Disease Seminar (1)
Prerequisites: Introductory epidemiology and biostatistics. Detailed review of selected topics in infectious disease epidemiology. May be repeated. Fall. Thomas.

EPID 315 Field Training in Epidemiology (3-6)
Prerequisite: Advanced standing. Designed to give epidemiology majors a supervised field experience in population health research. Fall, spring and summer. Staff.

EPID 325 Cancer Research Seminar (1)
Local cancer researchers will discuss their on-going research activities and opportunities for students. Students will be responsible for reading background material prior to seminars. Fall. Staff.

EPID 350 Reproductive Epidemiology Seminar (1-2)
Prerequisites: Introductory epidemiology and biostatistics; EPID 219. Permission of instructor required. Detailed review of selected topics in reproductive epidemiology. May be repeated for credit. Fall and spring. Savitz.

EPID 351 Advanced Seminar in Cardiovascular Research (1-3)
Permission of instructor required. Review of substantive and methodologic research in cardiovascular and cerebrovascular diseases. May be repeated for credit. Two to six seminar hours a week. Spring. Tyroler.

EPID 359 Epidemiology Laboratory Practicum (1-9)
Permission of instructor required. Students work individually with a faculty member on supervised laboratory research and skills development. May be repeated for credit. Two to 18 laboratory hours a week. Fall and spring. Baric, Hall, Seed, Stamm.

EPID 360, 361 Research in Epidemiology (2-9)
Permission of instructor required. Independent investigation in consultation with an instructor who must assign or approve the subject of research. Credits will vary according to the effort and rigor of the research. Fall, spring and summer. Staff.

EPID 368 Epidemiology and Health Policy (3)
Prerequisites: Basic course in epidemiology and biostatistics. Epidemiology for policies on health services, environment, occupation and pharmaceuticals. Indices/classifications, risk

assessment/management and design/analyses are covered. Weight of evidence, research, government, industry, population, world and media are considered. Three lecture hours a week. Spring, alternate years. Ibrahim.

EPID 380 Hospital Epidemiology (1-2)
Prerequisites: EPID 168 and EPID 218. Permission of instructor required. Comprehensive seminar in hospital infection control. Topics include issues in employee health, surveillance, outbreak investigation, environmental sampling and policy formation. May be repeated for credit. Two to four seminar hours. Fall, spring and summer. Weber.

EPID 392 Master's Paper (1-6)
Fall, spring and summer. Staff.

EPID 394 Doctoral Dissertation
Fall, spring and summer. Staff.

EPID 400 General Registration (0)

UNC-CH News Services/ Will Owens

Health Behavior & Health Education

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Charles L. Harper
Godfrey M. Hochbaum
Lucy S. Morgan
Eunice N. Tyler

Clinical Professor Emeritus
Howard Barnhill

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Eugenia Eng
Elizabeth Mutran
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Victor J. Strecher

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Richard M. House

Research Associate Professor
Robert DeVellis

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Susan T. Ennett
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Christopher Ringwalt
Miriam Bachar Settle
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Emily T. Tyler
Karen M. Webb
Lynn E. Williams

Health Behavior & Health Education

The Department of Health Behavior and Health Education is concerned with the general field of health-related social and behavioral change ranging from the levels of social policy to those of community, family and individual. It has particular research and practice interests in women's health, patient education, mental health, rural health, international health, adolescent health, ethnic minority health and the health of the elderly.

The department offers four graduate degree programs and an undergraduate major in Health Behavior and Health Education in the BSPH degree program. General information and details about admission and the undergraduate curriculum are found on pages 13–14 of this catalog and in *The Undergraduate Bulletin*. Students in the program are prepared for entry-level positions in health behavior and health education in health and other community agencies and for graduate study in health behavior and health education.

The Master of Public Health (MPH) degree is the basic qualification for the professional health education specialist. The program of study prepares candidates for professional roles in community development, social action, health promotion and disease prevention, and in domestic and international policy agencies. In general, students are prepared for leadership positions in health education planning, management and evaluation. The focus of the MPH program is on the practice of selecting, applying and monitoring appropriate behavioral, social and political change strategies to enhance people's health.

UNC-CH News Services/ Dan Sears

The general requirements for admission are set forth on pages 14–16. The previous bachelor's degree should include a minimum of four courses in psychology, sociology, anthropology and/or political science, with at least one of these being an advanced course. The candidate should have a minimum GPA of 3.0 for the junior and senior years. All applicants must take the GRE. Foreign students must also take the TOEFL.

In admission policy, besides the level and relevance of previous academic achievement, special consideration is given to developing a balanced student body recognizing the obligation to state residents and including a mix of individuals with special life or work experience drawn from the United States and foreign countries.

The minimum period of study is four semesters and two summer sessions in continuous full-time residence, admission being only in the fall of each academic year. A minimum of 54 semester hours is required. This includes School of Public Health core courses (e. g., Biostatistics, Epidemiology, etc.), Health Behavior and Health Education core, and elective courses and field practice.

All students take a common core of departmental courses for the first 12 months. An integrated theory, practice and research methods sequence is organized into learning modules, each of which is planned and taught by a team of faculty. This sequence is complemented by required program planning and management courses. All students are also required to complete a 12-month field practicum which runs concurrently with the course sequence. The field work begins with a community diagnosis conducted by student teams and guided by field preceptors, who are local health education professionals. Subsequently, students work individually with a faculty advisor to design, implement and evaluate an intervention project. The practicum and course modules are sequenced and paced so that students can learn concepts and methods in the classrooms that can be immediately applied in the field.

At the end of the first year, each student must pass a written comprehensive examination. This examination covers theory, practice and evaluation research in health behavior and health education. During the remaining two semesters, students focus on a special study

area. They take elective courses and concentrate on their master's paper. The topic must address a public health problem that has implications for health behavior and health education theory and practice.

The Master of Science in Public Health (MSPH) is a more specialized program of study. Students may specialize in either planning health education and behavior change programs (Track 1) OR in research methods (Track 2). Each track requires 34 credit hours of coursework, an internship, a master's paper and a comprehensive examination to be completed over a 12-18 month period. Enrollment on a full-time basis is highly desirable but not required. Students must matriculate in the fall semester following admission. Summer session enrollment is not required.

The general requirements for admission are set forth on pages 16–18. In addition, MSPH Track 1 students must have at least seven years of progressively responsible positions in health education, exclusive of experience gained during school enrollment. Track 1 is for students who need specialization in health behavior and health education planning. For MSPH Track 2 students, special consideration is given to applicants with one or more years of relevant practice or research experience. Track 2 prepares students for mid-level research positions or entry into a doctoral program.

Two doctoral degrees are offered: The Doctor of Philosophy (PhD) and the Doctor of Public Health (DrPH). In the PhD program, emphasis is placed on the behavioral and social sciences, research and theory development and advanced research methodology. The program is designed primarily for students who intend to do research and teach in academic settings. The DrPH program emphasizes the application of research findings to the solutions of public health problems, policy development, program administration and program evaluation. This program is most suitable for students who are interested in the administrative, consultative and evaluative research roles in public health. Four consecutive semesters in full-time residence are required.

Applicants are required to have a master's degree in health behavior and/or health education, in one of the social or behavioral sciences, or in any field encompassing comparable training, such as social work, public health administration or epidemiology. They must provide evidence of competency in public health in general, proficiency in at least one of the social or behavioral sciences, and knowledge of basic aspects of health behavior, health education and and an understanding of the conduct of research.

HBHE 9 Freshman Seminar (3)
For freshmen only. A review of the nature of modern health problems and the roles of the individual, the community, the health professions and agencies in medical care and health maintenance. Fall. Staff.

HBHE 50 Personal and Community Health Behavior (3)
Relation of living habits and practices to health maintenance, disease prevention and use of the health-care system. Spring. Staff.

HBHE 90 Field Training in Health Education (4)
Prerequisite HBHE 103. Experience as a functioning health educator in a community setting under supervision. Field fee: $100. Fall, spring and summer. Hatch, staff.

HBHE 91 Field Training Evaluation (2)
Pre- or Corequisite: HBHE 90. Permission of instructor required. Evaluation of field practice. Written report required. Fall, spring and summer. Staff.

HBHE 97 Readings in Health Education (3-6)
Directed readings or laboratory study. Written report required. Six to 12 hours a week. Fall, spring and summer. Staff.

HBHE 99 Honors in Health Education (3-6)
Prerequisite: HBHE 97. Directed research. Written report required. Six to 12 hours per week. Fall, spring and summer. Staff.

HBHE 101 Aging and Human Development (3)
[PHNU 124, HPAA 124, NUTR 101] Lectures concerned with biological, physical, emotional, demographic and social aspects of aging. Field trips to institutions and home visits. Fall. Staff.

HBHE 102 Defining Public Health Problems (3)
Permission of instructor required. Overview of field of public health; focus on cultural, psychological and social forces that influence health behavior. Treatment of public health principles, theories and strategies basic to the practice of health education. Three lecture hours per week. Fall. Jackson.

HBHE 103 Implementing and Assessing Health Education (3)
Permission of instructor required for non-majors. Focus on core understanding and skills needed to initiate and evaluate practice at the individual, small group and community levels. Topics include support groups, patient education and advocacy. Three lecture hours per week. Spring. Jackson.

HBHE 104 School Organization for Health Education (3)
Permission of instructor required for non-majors. Introduction to school health education and administration including components and organization of a comprehensive school health program, curriculum design and evaluation.Three lecture hours per week. Spring. Barr.

HBHE 108 Minority Health and Health Services Delivery (2)
The life experiences of ethnic minorities in the United States with special reference to the implications for their participation in health programs. Two lecture hours per week. Spring. Hatch.

HBHE 109 Rural Health and Community Action (3)
Permission of instructor required. Community education and action as modes of intervention in rural communities. Cross-cultural perspectives of rural health development. Three seminar hours a week. Fall. Hatch.

HBHE 120 Promoting Health in a College Setting (3)
Lectures and seminars on planning, implementing and evaluating health education programs in a college setting with an emphasis on health promotion and wellness. Two lecture and two seminar hours per week. Staff.

HBHE 121 Health Promotion Practicum (3)
Prerequisite: HBHE 120. This field placement in the Student Health Service will provide an opportunity to implement skills learned in HBHE 120. Nine laboratory hours a week. Staff.

HBHE 125 Injury as a Public Health Problem (3)
[MHCH 125] Pre- or Corequisite: EPID 160. This course considers the causes and consequences of traumatic injury within developmental, social and economic contexts and dilemmas in injury prevention. Injuries associated with transportation, violence and the home and occupational environments are included. Three lectures per week. Spring. Runyan, Kotch.

HBHE 130 Social and Behavior Science Foundations of Health Education (Variable Credit)
Permission required for non-majors. Selected social and behavioral science theories and concepts that apply to the analysis of health-related behavior and to the generation of intervention strategies. Three lecture hours and one seminar hour per week. Fall. DeVellis.

HBHE 133 Interpersonal and Group Relations (3)
Permission of instructor required. An experimental study of human relations with emphasis on analysis of interpersonal and group interaction, the effective use of intervention in group problem-solving, leadership styles and team building, inter-group cooperation and conflict. Two lecture and two laboratory hours per week. Spring. Staff.

HBHE 140, 141, 142 Problems in Health Education (1 or more)
Prerequisites to be arranged with the faculty in each individual case, depending upon the problem that is to be studied. A course for students of public health who wish to make an intensive study of some special problem in public health education. Fall, spring and summer. Staff.

HBHE 150 Group Dynamics and Discussion Group Leadership: Human Sexuality (4)
Permission of instructor required. Interpersonal and group interaction, theory and practice. Design and application of training exercises. Focus on leadership in group dealing with human sexuality. Fall and spring. Staff.

HBHE 160 Introduction to Women's Health and Health Education (3)
[WMST 161] Using a lecture-discussion format, this course provides an overview of women's health-specific interests as family and community members, as patients and as health professionals. Implication for health education practice as well as opportunities for future research will be emphasized. Two lecture and two seminar hours per week. Fall. Earp.

HBHE 164 Health Policy and Aging (3)
[HPAA 164] Critical examination of aging policy in light of empirical findings on the elderly's economic power. Utilization patterns, prevalence of dependency and the cost-effectiveness of policy options, including long-term care. Three seminar hours a week. Fall. Mutran.

HBHE 172 Principles and Practice of Patient Education (2-3)
Principles and practice of implementing, coordinating and evaluating patient education programs. Two lecture hours per week (3-hour credit will be granted on the basis of a relevant research activity approved by instructor). Spring. Staff.

HBHE 180 Mental Health Promotion: Social and Behavioral Change Approaches (3)
Critical review and evaluation of programs targeted at individuals, families, interpersonal networks, communities and larger social units that have the promotion of mental health as a goal. Spring. Staff.

HBHE 185 Topics in Worksite Health Promotion (3)
[PHNU 185] An overview of critical scientific, political, economic, behavioral and other issues as they affect planning, conduct and evaluation of health promotion/risk reduction programs at the worksite. Spring. Staff.

HBHE 189 Adolescent Health (3)
[MHCH 226, PHNU 226] Topics covered include the epidemiology of health problems, developmental issues, health services and psycho/social influence on adolescent problem behaviors. Course material will be useful for research generation and practical application. Three seminar hours a week. Spring. Foshee.

HBHE 190 Psychosocial Aspects of Aging (3)
[PHNU 190, HPAA 190] Permission of instructor required. Psychosocial aspects of the aging process and of old age. Needs of the elderly and their reactions to agencies and programs for the aged. Two lecture and two seminar hours per week. Spring. Mutran.

HBHE 200–204 Special Studies in Behavior Change (1 or more)
Permission of instructor required. HBHE 200 – natural change process in health-related behavior; HBHE 201 – planned change; personal and non-personal methods. HBHE 202 – program design and evaluation; HBHE 203 – personal development and community action; HBHE 204-social class and culture variations in planned change. Fall, spring and summer. Staff.

HBHE 208 Units of Practice I: Family and Kinship Systems (3)
Permission of instructor required. The relationship of family and kinship patterns to health behavior; implications for planned change. Staff.

HBHE 209 Units of Practice II: Individual, Small Group and Network (1-3)
Corequisite: HBHE 241 or permission of instructor. Behavior systems in the individual, small group, family and other styles for planned change in personal health-related behavior, interpersonal and non-personal methods. Fall and spring. Staff.

HBHE 210 Units of Practice III: The Community (1-3)
Corequisite: HBHE 241 or permission of instructor. The nature and delineation of communities as social systems; theories, principles and practices relevant to health-related community development process; the identification of formal and informal leadership and power structures, etc. Two lecture and seminar hours per week. Fall, spring and summer. Eng.

HBHE 211 Units of Practice IV: Social Policy and Large Populations (1-3)
Health education social policy roles and strategies. The nature and delineation of policy and large populations as units of health education practice; includes field practicum. One to three seminar hours and one to three laboratory hours per week. Spring, alternate years. Steckler, Dawson.

HBHE 212 Citizen Participation in Community Health Decision Making (1-4)
Permission of instructor required. Theories and concepts of citizen participation in community health settings; historial review of mandated citizen participation; and strategies for enhancing citizens' ability to influence the social policy process. One to three lecture hours and zero to two seminar hours per week. Fall. Steckler.

HBHE 215 Natural Change Determinants in Health-Related Behavior (3)
Permission of instructor required. An integrated behavioral science approach to unplanned determinants of change in the health-related behavior systems of the individual, small group and community. Fall. Staff.

HBHE 216 Cultural, Health and Planned Change (3)
The relationship between effective planned health-related behav-

ioral and social change and cultural systems are explored. Fall. Staff.

HBHE 222, 223 Professional Practice (1-2)
Corequisite: HBHE 242 or permission of instructor. Studies in the professional role of the change agent and consultant with special reference to cross-cultural settings; the development of the professional and sources of innovation and practice. Fall. Dawson.

HBHE 225 Health Communication Theory and Research (3)
Prerequisite: HBHE 130. Permission of instructor required for non-majors. Overview of communication theory and research. Critical analysis of the application of communication theory to health education and health behavior intervention. Lecture-discussion format, three hours a week. Fall. Jackson.

HBHE 230 Public Policy and the Politics of Health (3)
[HPAA 262] The course objectives are to identify an ecological view of modern health problems and its implications for health policy development and to analyze the effectiveness of major health promotion strategies. Spring. Milio.

HBHE 231 Cross-Cultural Consultation (3)
Corequisite: HBHE 243. Permission of instructor required. The process and content of cross-cultural and international consultation in technical assistance to developing country health programs with special reference to planned social and behavioral change. Fall. Staff.

HBHE 232 Health, Development and Technology (3)
Critical analysis of the theories in and approaches to adult learning, economic development, technology transfer and primary health. The course includes a review of non-formal education and community organization techniques as tools for integrating health and development in the rural U.S. and in developing countries. Fall. Eng.

HBHE 233 Introduction to Program Management (2)
An introductory overview of health education program management. A practical study of personnel and financial management issues including staff development, recruitment, performance appraisal, budget preparation and monitoring. Six lecture hours per week. Summer. Dawson, House.

HBHE 234 Team Problem Solving (1 or more)
Prerequisite: HBHE 133 or permission of instructor. An experimental study of interpersonal relations in professional team settings; intra- and inter-team relationship process to large social systems with emphasis on intervention techniques. Spring. Staff.

HBHE 235, 236 Instructional Materials and Development (1-3)
Permission of instructor required. Independent projects in the design, production, validation and utilization of self-instructional training materials for use in college courses, in-service training programs, patient education, etc. Students may arrange for credit proportionate to the complexity of the individual project. Fall and spring. Staff.

HBHE 240 Community Diagnosis and Needs Assessment (3)
Corequisite: HBHE 130. Purpose and methods for conducting community diagnosis, needs assessment and descriptive research in health education practice. Student teams work under field preceptors to apply these methods for subsequent problem formulation and evaluation. Field Fee: $450. Three lecture hours per week. Fall. Dawson.

HBHE 241 Program Intervention Design and Evaluation (Variable Credit)
Corequisite: HBHE 250. Introduction to social and behavioral change models for designing, evaluating and institutionalizing health education interventions. Students work under faculty advisors to develop an intervention plan in partnership with client communities and agencies. Three lecture hours per week. Spring. Dawson.

HBHE 242 Program Intervention, Implementation and Monitoring I (2)
Prerequisite: HBHE 241. Corequisite: HBHE 251. Methods for executing health education intervention plans, including monitoring effectiveness and making appropriate modifications. Students work under faculty advisors to collaborate with local agencies and implement the plan of action developed in HBHE 241. Six lecture hours per week. Summer. Dawson.

HBHE 243 Program Intervention, Implementation and Monitoring II (2)
Prerequisite: HBHE 242. Application of methods to analyze and interpret data regarding the effectiveness of health education interventions. Students work under faculty advisors to assess the effectiveness of interventions implementation in HBHE 242. Six lecture hours per week. Summer. Dawson.

HBHE 246 Public Health Program Planning and Evaluation (4)
[HPAA 246, MHCH 246, PHNU 246, PUBH 246] Prerequisite: Two years work experience. Permission of instructor required for non-majors. Fundamentals of public health program planning and evaluation with emphasis on applications in neighboring communities and writing proposals for project funding. Three lecture hours and one lab hour per week. Spring. Peoples-Sheps, Eng, Foshee.

HBHE 250 Applied Research Methods in Health Behavior and Health Education (4)
Permission required for non-majors. Research methods of relevance to planned change in health-related behavior and program planning. Research designs will include quantitative and qualitative methods and will focus on application to public health practice. Four lecture hours per week. Spring. Jackson.

HBHE 251 The Role of Evaluation in Health Education (2)
Prerequisite: HBHE 250. Emphasis on methods to show the importance of evaluation in health education program planning and developing skills in formative evaluation design, emphasizing analysis that contributes to decision-making regarding programs. Three seminar hours per week. Strecher.

HBHE 252 Presenting Research Results in Professional and Community Settings (1)
Prerequisites: BIOS 110 and HBHE 250 or equivalents. A practical introduction to methods of presenting health information and research results to professional and lay-persons in community settings. Lectures and readings present techniques for writing scientific abstracts, making oral presentations to professional colleagues and presenting health information to the media. Students will also learn personal computing skills necessary to produce a newsletter and poster presentation of their own research. Three lecture hours per week. Headen.

HBHE 253 Qualitative Evaluation and Research Methods (3)
Prerequisite: HBHE 250 or equivalent. Philosophy of qualitative evaluation and research studies. Collecting and analyzing qualitative data through participant observation, interviewing, group methods and case studies. Three lectures per week. Fall. Steckler.

HBHE 254, 255 Personnel Development (1-3)
Corequisite: HBHE 234 or permission of instructor. The study of training and supervision as processes for personnel development in programs of planned change; training system strategies, design, teaching styles, methods and evaluation; the personnel development role in supervision, effects of organizational climate, etc. Fall and summer. Staff.

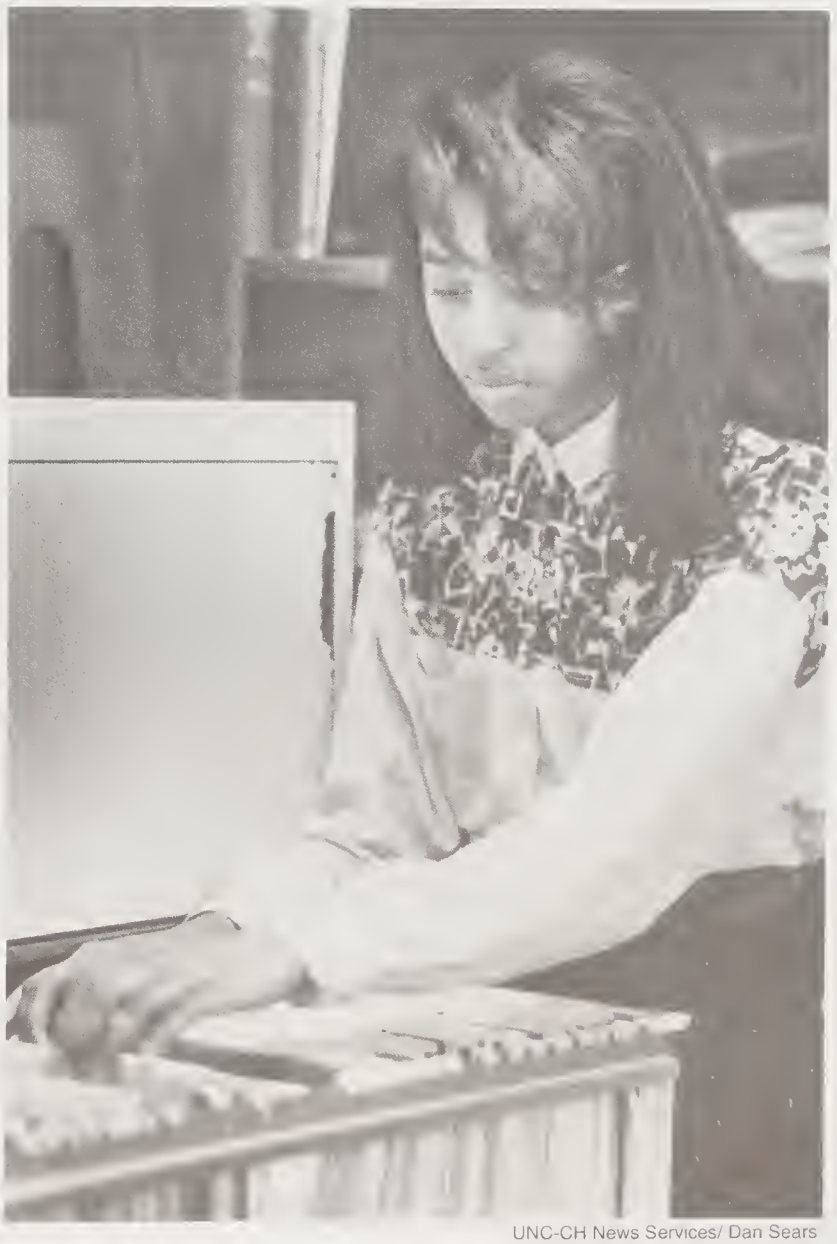
HBHE 260 Research Methods (3)
Prerequisites: BIOS 110 and HBHE 250. Permission required for master's students and non-majors. An intermediate-level course providing comprehensive coverage of behavioral science research methods as applied to health behavior and health education problems. Topics include problem formulation, design, sampling, measurement, analysis and interpretation. Three lecture hours per week. Spring. Bauman.

HBHE 300 Social Psychological Theories of Individual Health Behavior (3)
Prerequisite: HBHE 130 or permission of instructor. Selected social psychological theories and their relationship to health promotion, disease prevention and patient education. Three lecture hours per week. Spring, alternate years. DeVellis.

HBHE 301 Sociological Theories and Health (3)
Permission of instructor required. This seminar reviews selected sociological theories and their relationships to public health, health behavior and health education. Three seminar hours per week. Spring, alternate years. Bauman.

HBHE 310–317 Doctoral Seminars in Health Education (1-3)
Prerequisite: Master's degree. Permission of instructor required for non-majors. A series of seminars designed to explore the scientific foundations of health education and their implications for health education practice. Two to six seminar hours a week. Fall, spring and summer. Staff.

HBHE 340 Field Training in Health Behavior and Health Education (3)
Permission of instructor required. Under guidance by faculty and field counselors, students assume major responsibility for intervention and research practice projects. Open only to doctoral and MSPH students in the department. Field fee: $125 per semester. Fall. Dawson.



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HBHE 341, 342, 343 Advanced Field Training in Health Education (1–3)
Under guidance by faculty and field counselors, students assume major responsibility for planning, executing and evaluating community health education projects. Open only to doctoral students in the department. Field fee: $125 per semester. Fall and spring. Dawson.

HBHE 350 Secondary Data Analysis (3)
Prerequisite: BIOS 145 or equivalent. Permission of instructor required. This seminar is designed to refine a wide range of research skills in health behavior and health education by using data collected by others. Three seminar hours per week. Spring, alternate years. Bauman.

HBHE 351 Causal Modeling and Structural Equations (3)
Prerequisite: BIOS 145 or equivalent. Permission of instructor required. Focus on causal modeling and strategies for analyzing such models including LISREL analysis. Secondary data will be available for course assignments. Three lecture hours per week. Spring, alternate years. Mutran.

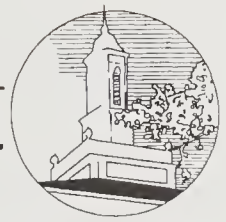
HBHE 352 Scale Development Methods (3)
Prerequisite: HBHE 250 or equivalent. Permission of instructor required. Covers theory and application of scale development techniques for measuring latent constructs in health research. Classical measurement theory and factor analytic methods are emphasized. Three seminar hours per week. Spring. DeVellis.

HBHE 353 Advanced Evaluation of Health Intervention Programs (3)
Prerequisites: BIOS 145, HBHE 250, HBHE 251 or equivalents. Permission of instructor required. Emphasis on methods required to complete various types of analysis related to program implementation (e .g., efficacy of program in terms of objectives, cost-benefit analysis, utility analysis). Both quantitative and qualitative methods will be covered. Three seminar hours per week. Fall. Earp and Strecher.

HBHE 392 Master's Paper (1–6)
Fall, spring and summer. Staff.

HBHE 394 Doctoral Dissertation (3–9)
Fall, spring and summer. Staff.

HBHE 400 General Registration (0)



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Carol J. Spratt

Instructors
Elaine M. Asper
James H. Hahn

Clinical Instructors
Barbara O. Chavious
Robert C. Schreiner

Adjunct Instructors
Mary A. Beck
Maria C. Clay
Arlene J. Diosegy
Douglas A. Johnston
Michael Karpinski
Bernard R. Kingsley
Margaret E. Moore
Matthew M. Person, III
Daniel B. Reimer
Joann Richards

Lecturers
Nanette V. Mengel
Robert B. Moorhead,
Associate Dean
Ernest A. Schoenfeld,
Associate Dean

Adjunct Lecturer
Jo-Ann L. Thorpe

[1] Deceased Dec. 10, 1992

Health Policy & Administration

The Department of Health Policy and Administration offers educational programs at the undergraduate, master's, doctoral and postdoctoral levels. Each of these programs has special characteristics.

The undergraduate program (BSPH degree) prepares students for entry-level positions as managers of small facilities, as administrators of units within larger facilities and for a variety of staff positions in health and health-related organizations. In addition, the program prepares students for graduate study in the health professions or related professional programs such as business, law or medicine. For further information about this program contact Professor Patricia Z. Fischer, director of the undergraduate program.

The department offers three master's degree programs: the Master of Public Health (MPH), Master of Healthcare Administration (MHA) and Master of Science in Public Health (MSPH).

The MPH degree requires 12 months of full-time studies in residence in Chapel Hill. Only those who hold doctoral degrees (MD, DDS, JD, PhD, etc.) or are enrolled in such degree programs are accepted. The MPH degree is designed to provide health professionals and scholars with a comprehensive understanding of public health philosophy and values and to develop competence for managerial and policy roles in the field of public health and related areas. Those interested in board certification in preventive medicine and public health dentistry are encouraged to consider this degree.

The MHA degree program provides concentrated study in health-care administration, while the MSPH degree program provides for concentration in health policy. Although the minimum qualification for admission to the MHA and MSPH programs is a bachelor's degree from an accredited college or university, those with graduate and professional degrees (MD, DDS, JD, etc.) should also give serious consideration to these degrees because of their high quality and rigor. All students admitted for these degrees are expected to have proficiency in microeconomics, mathematics and accounting. The programs are 21 months in duration. The first year consists primarily of required courses; most of the second-year courses are electives. Students select an area of further specialization such as policy analysis, health economics, financial management, quality management, marketing or international health. For further information on the residential master's degree programs, contact Professor William M. Zelman, director of the master's program.

By special arrangement, master's degree programs may also be pursued simultaneously with several other degrees. The following combined degree arrangements have been developed: MD/MPH, DDS/MPH, JD/MPH and PhD/MPH. Interested students should contact Pamela H. McDonald, department registrar, for further details.

The department also offers two executive MPH and MHA degree programs designed for employed health professionals and health administrators. The MPH offers two areas of concentration: management and dental public health. The MHA offers a concentration in financial management. The minimum requirements for admission are a bachelor's degree from an accredited college or university and three years of clinical and/or administrative experience in a health-care setting.

The North Carolina Program provides instruction one day a week during the regular academic year at sites accessible to students in western and eastern North Carolina. This program is offered on a three-year cycle. The National Program provides instruction through a combination of six-week summer school sessions, integrated residential and nonresidential courses, and course transfer options to reach health administrators over a wider geographic area. A new class is accepted each year in this program. The curriculum, faculty, examinations, standards and other expectations for both the North Carolina Program and the National Program are the same for students in the residential MPH program and MHA programs. For additional information contact Professor James V. Porto, director of the Executive Master's Programs.

Studies for the doctoral degree are organized in two tracks: PhD and DrPH. The PhD and DrPH programs are built on a series of core courses in the major field of health policy and administration.

The PhD degree requires (1) a disciplinary area in which a formal minor is designated, such as sociology, political science, finance, economics, demography or epidemiology; and (2) a dissertation in health policy and administration that is based on, proceeds from and contributes to applicative knowledge in the disciplinary field.

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In addition to the minimum admission requirements, a master's degree in public health with emphasis in health services and administration or an equivalent degree from an accredited university is required. Students entering the program are also expected to have completed, or to complete during doctoral study, the equivalent of one year of graduate-level statistics, a course in health program planning and evaluation, a course in the U.S. health system, a course in environmental health, and a course in epidemiology. Under special circumstances, students enrolled in the Health Policy and Administration MSPH, MHA or MPH programs of study may transfer to the PhD program after successful completion of one year of study. For further information contact Professor Gary Rozier, director of the doctoral program.

The DrPH degree is closely tied to the School of Public Health Leadership Program, designed to prepare senior leaders in public health at the local, state and federal level. Individuals interested in the DrPH degree should contact Associate Professor Mary Peoples-Sheps, director of the Public Health Leadership Program.

The department has a special collaborative arrangement for doctoral studies with the School of Pharmacy for students with background in pharmacy administration.

The appointment as a Visiting Scholar is given for a minimum of one semester to a maximum of three years. Visiting Scholars need not have a doctoral degree, since they are accepted primarily on the basis of their professional status rather than academic credentials. For further information contact Professor Kerry E. Kilpatrick, chair of the department.

Detailed information on the various programs of study, curricula, faculty, admissions requirements and financial assistance is available upon request from the department.

HPAA 70 Introduction to Health Services Systems (3)
Corequisite: HPAA 71. Permission of instructor required for non-HPAA and HBHE majors. An introduction to the current status, trends, practices and issues in the delivery of health services. Fall. Staff.

HPAA 71 Orientation to Health Services Organizations (1)
Corequisite: HPAA 70. Permission of instructor required for non-HPAA and HBHE majors. Opportunities for those with limited exposure to health-related organizations to visit several operating agencies, as an approach to understanding the U.S. health system. Fall. Chavious.

HPAA 72 Writing for Health Administrators (3)
Designed to teach clarity, conciseness and effectiveness of statement. Memoranda, reports, proposals, letters. Required of HPAA undergraduates. Spring. Mengel.

HPAA 73 Management of Human Resources (3)
Permission of instructor required for non-HPAA majors. General introduction to the broad field of human resource management in health organizations in the U.S. Detailed treatment of selected topics with a view to help develop operational skills. Spring. Clay.

HPAA 75 Foundations of Health-Care Financial Management (3)
Prerequisite: BUSI 71. Permission of instructor required for non-BSPH students. Basic methods and techniques in financial management of health-care programs including financial statement analysis, cost determination and allocation, pricing of services and budgeting. Spring. Porto.

HPAA 83 Introduction to Health Organization Structure, Functions and Design (3)
Senior standing or permission of instructor required. Basic concepts of organization structure, functions and design, and relevant administrative behavior, as applied to health and human services organizations. Fall. Files.

HPAA 85 Computers in Health Administration (3)
Permission of instructor required for non-HPAA majors. The purpose of this course is to provide the student with a general introduction to the theory and to the major applications of computers, especially microcomputers. Fall and spring. Porto.

HPAA 91 Readings in Health Policy and Administration (3-6)
Permission of instructor required. For undergraduates enrolled in the department's bachelor's degree program. Directed readings or research; written reports are required. Fall, spring and summer. Staff.

HPAA 97 Field Training in Health Policy and Administration I (3)
The first six weeks of a supervised 12-week administrative internship in a health-care organization. Required of all HPAA undergraduates. First summer session. Fischer.

HPAA 98 Field Training in Health Policy and Administration II (1-6)
Orientation to health services organizations, under faculty supervision. Relevant to SPH coursework in all majors; can contribute to development of acceptable plans for summer internships. Field fee: $200. Second summer session. Fischer.

HPAA 99 Honors Research (6-9)
Prerequisites: Overall GPA 3.3. by end of junior year in all UNC-CH courses, permission of department chair. Readings and seminars for undergraduates who show potential and talent to do research. Students will carry out a special project and prepare an honors thesis based on the project. Fall, spring and summer. Staff.

HPAA 101 Information Management in Health Policy and Administration (1)
Introduces students to methods for critically evaluating public health literature and using computers to identify, file and retrieve information. Fall. Moore.

HPAA 102 Concepts of Health Administration (3)
Survey of health and human services organization and management, including concepts of administrative systems, government, legal and public interest aspects, organizational behavior and relations. Spring. Allen.

HPAA 104 Issues in Managing Health-Care Organizations (Variable Credit)
Through presentations of leaders in the health-care field and class discussion, problems, issues and changes in health-care policy and administration will be explored. Spring. Porto.

HPAA 105 Issues in Health Policy (1-3)
Lectures on current topics in the area of health policy. Spring. Staff.

HPAA 106 Issues in Health-Care (1-2)
Lectures on current topics in the area of health care. Fall and spring. Staff.

HPAA 107 Theory and Practice of Public Health Policy and Administration (3)
Policy and management issues and ideals, including their historical derivations and international implications, in relation to current state and local practice. Fall and spring. Staff .

HPAA 109 Concurrent Field Training in Health Policy and Administration (1-3)
Supervised observation of service activities in health service organizations. Fall and spring. Staff.

HPAA 110 International and Comparative Health Administration (3)
Permission of instructor required. International career interests desirable. Study of various health problems and responsive program systems in different (more or less developed) countries, with a comparative framework, examining special experiences, general lessons and possibilities for cooperation. Fall. Bender, Freymann.

HPAA 121 Hospital Organization and Administration (3)
Comprehensive overview of general hospitals, including organizational structure, governance, medical staff, external relationships, departmental organization, strategic planning, financing, regulation, accreditation, quality assessment. Addressed from perspective of the chief executive officer. Fall. Staff.

HPAA 122 Long Term Care Administration I (3)
Introduction to administration of long-term care facilities. Evolution of long term care, survey of the current field. Examination of state and national requirements. Spring. Allen.

HPAA 123 Long Term Care Administration II (3)
Prerequisite: HPAA 122 or permission of instructor. Nursing home care, organization monitoring, costs and financing. Exploration of trends and issues such as cost controls, productivity, quality assurance, medical staffing and organization. Fall. Allen.

HPAA 124 Aging and Human Development (3)
[HBHE 101, NUTR 101 PHNU 124] Lectures concerned with biological, physical, emotional, demographic and social aspects of aging. Spring. Staff.

HPAA 127 Introduction to Dental Public Health (3)
Permission of instructor required. Survey of the theory and practice of dental public health with an emphasis on basic knowledge and skills necessary for planning and evaluating dental public health programs. Fall and spring. Rozier, Bader.

HPAA 130 Organizational Design and Behavior of Health Institutions (3)
Overview of organizational theory and empirical findings appropriate to the design and behavior of health-care organizations. Topics include the design of the organization, its performance and relationship to the environment. Fall and spring. Kaluzny.

HPAA 138 Conflict Resolution and Negotiation for Managers (3)
Listening, assertion, negotiation and mediation. Spring. Fischer.

HPAA 139 Development of Personal Effectiveness (3)
Permission of instructor required. Based on the assumption that personal effectiveness depends on being able to think clearly, this course encourages the development of rational thinking through understanding the relationship between thinking and feelings. Spring. Fischer.

HPAA 140 Readings in Health Policy andAdministration (1-6)
Staff.

HPAA 141 Marketing for Not-For-Profit Organizations (3)
Permission of the instructor required. Application of basic principles of marketing and marketing decision models to problems in health-care and other not-for-profit organizations. Spring. Parker.

HPAA 144 Statistical Methods for Health Policy and Administration (3)
Introduction to a linear model approach to the analysis of data in health-care settings. Topics include probability distributions, estimation tests of hypothesis, methods in multiple regression and analysis of variance and covariance. Spring. Staff.

HPAA 145 Introduction to Strategic Planning and Marketing in Health Systems (3)
Permission of instructor required. An introduction to the philosophy methods and models of strategic planning in health-care systems. Related disciplines include marketing, management, organizations, systems and decision analyses. Spring. Parker.

HPAA 155 Introduction to Management Information Systems in Health-Care (3)
Conceptual and practical aspects in the analysis, development and utilization of computer-based information and control systems, with emphasis on application to the health-care environment. Fall and spring. Schreiner.

HPAA 161 Strategies for Prevention (3)
This course discusses the effects of public policies for prevention on rates of illness, injury and premature death. Fall. Fischer.

HPAA 163 Geriatric Health and Medical Care (3)
Presents a comprehensive survey of geriatric health and medical care from both a clinical and policy perspective. Spring. Staff.

HPAA 164 Health Policy and Aging (3)
[HBHE 164] Permission of instructor required. Critical examination of aging policy in light of empirical findings on the elderly's economic power. Utilization patterns, prevalence of dependency and the cost-effectiveness of policy options, including long-term care. Spring. Mutran.

HPAA 170 Economic Perspectives in Health Policy and Administration (3)
Prerequisite: ECON 10 or permission of instructor. An introduction to health economics principles as applied to major sectors of the U.S. health-care delivery system. Spring. Kilpatrick, Thorpe.

HPAA 176 Introduction to Health Services Research (3)
Prerequisite: MPH student. Provides systematic introduction to selected methods for health services research, health services research literature and research writing. Fall and spring. Staff.

HPAA 180 Health Law (3)
The law and the legal decision-making processes and their relationship to the delivery of health services. Fall and spring. Staff.

HPAA 185 Ethical Issues (3)
Nature of ethical thought and reasoning; contributions of religion and science; historical and current issues. Sections on professional practice issues and health policy issues. Fall. Allen.

HPAA 190 Psychosocial Aspects of Aging (3)
[HBHE 190, PHNU 190] Permission of instructor required. Psychosocial aspects of the aging process and of old age. Needs of the elderly and their reactions to agencies and programs for the aged. Two lecture and two seminar hours per week. Fall. Mutran.

HPAA 209 Field Work in Health Policy and Administration (1)
Prerequisite: HPAA major. Supervised field experience in approved health agencies. Field fee is $450. Spring. Staff.

HPAA 210 Management of Foreign Aid in Health and Population (3)
Prerequisite: HPAA 240 and HPAA 110 or permission of instructor. The course will examine selected policy and management issues in foreign assistance from the point of view of both the donors and recipients. Spring. Jain.

HPAA 211 Population Policy and Program Development (3)
Prerequisites: BIOS 170, SOCI 212 or equivalents, or permission of instructor. Population policy concepts and processes; policy implications of population dynamics; program implementation issues; family-planning program strategies, design and evaluation; relating to U.S. and developing countries. Fall. Freymann.

HPAA 212 International Cooperation in Health and Population (2)
Prerequisite: HPAA 110 or equivalent or permission of instructor. Roles, problems, opportunities for different kinds of international organizations in health and population fields. Reference to general development context, organizational relationships, various subject areas and methods of cooperation and assistance. Spring. Freymann.

HPAA 220 Evolution, Organization and Financing of the U.S. Health System (3)
The course objectives are to provide students with basic knowledge of trends, issues and existing systems of health-care delivery within the U.S. Fall. Allen, DesHarnais.

HPAA 221 Organization and Administration of Multihospital Systems (3)
Prerequisite: HPAA 121 or permission of instructor. Legal, financial and organizational issues of multi-hospital systems development and management, including issues of corporate reorganizations, strategic planning and marketing. Prototypes and operating examples will be considered. Spring. Staff.

HPAA 222 Ambulatory Care (3)
Prerequisite: HPAA 220. Major policy issues in primary care and managed care. Emphasis on practice management, rate setting, contracting, utilization control and quality assurance as case issues for management. Spring. Huntley.

HPAA 223 Management of Non-Profit Organizations (3)
Principles and advanced topics in the management of non-profit organizations. Spring. McLaughlin.

HPAA 227 Dental Public Health Practice (3)
Permission of instructor required. Emphasis on knowledge of community measures for prevention and control of oral diseases, understanding the scientific basis for their use and designing and evaluating prevention programs for a specific population. Spring. Weintraub.

HPAA 228 Oral Epidemiology for Health Policy and Administration (3)
Prerequisite: EPID 160. Permission of instructor required. Focuses on the epidemiology of oral disease and implications and uses of this knowledge for dental health policy making and administration of dental programs. Spring. Rozier, Graves.

HPAA 230 Management of Human Resources in Health Organizations (3)
Prerequisite: HPAA 130 or equivalent or permission of instructor. Emphasis on clarifying concepts of human resources management and identifying the importance of human resources in health organizations. Fall and spring. Jain.

HPAA 231 Organization Assessment and Diagnosis (3)
Prerequisite: HPAA 130. This course will explore alternative models and approaches for assessing structural and process characteristics of health-service organizations. Fall, alternate years. Staff.

HPAA 232 Interorganization Theory and Behavior (3)
Prerequisite: HPAA 130. Theory and methods for studying the structure and dynamics of inter-organizational relationships in health, mental health and social-service settings. Spring. Morrissey.

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HPAA 233 Management of Organizational Change (3)
Prerequisite: HPAA 130. The objective of this course is to improve competence in analyzing health organizations and managing planned change. Fall and spring. Files.

HPAA 240 Health Administration and Planning (3)
Permission of instructor required for non-majors. This course provides an overview of the concepts, processes and methods used in policy analysis, strategic planning and management in the health-care sector. Fall and summer. Simpson, Parker.

HPAA 241 Introduction to Operations Research for Health-Care Systems (3)
Prerequisite: BIOS 110 or permission of instructor. Introduction to the systems analysis process in health-care systems. Deterministic and random models, mathematical programming, queuing, simulation, forecasting and measurement. Emphasis on model formulation and computer solution of decision models. Fall. Kilpatrick.

HPAA 242 Advanced Optimization Methods in Health Policy and Administration (3)
Prerequisite: HPAA 241 or permission of instructor. Analysis of complex deterministic models and their applicability to health-services research. Formulation of models for solving health-care decision problems, involving mathematical programming and heuristics. Spring, alternate years. Parker.

HPAA 243 Stochastic Processes in Health Policy and Administration (3)
Prerequisite: HPAA 241 or permission of instructor. Modeling and analysis of random processes in health-care systems. Markov and queuing models, simulation of complex stochastic systems, experimental design and output analysis. Spring. Kilpatrick.

HPAA 244 Advanced Quantitative Methods in Health Policy and Administration (3)
Prerequisite: HPAA 241 or permission of instructor. Analysis and application of advanced management science models to health and public-sector problems. Emphasis is given to advanced forms of mathematical programming, networks, decision theory and queuing. Spring. Staff.

HPAA 245 Program Evaluation (3)
Prerequisite: HPAA 241 or permission of instructor. Concepts and methods of the program evaluation paradigm as applied in health administration; experiential learning of evaluation planning, design and implementation. Spring. Veney.

HPAA 246 Public Health Program Planning and Evaluation (4)
[HBHE 246, MHCH 246, PHNU 246, PUBH 246] Prerequisite: Two years work experience. Permission of instructor required for non-majors. Fundamentals of public health program planning and evaluation with emphasis on applications in neighboring communities and writing proposals for project funding. Three lecture hours and one lab hour per week. Spring. Peoples-Sheps, Eng, Foshee.

HPAA 250 Introduction to Health-Care Financial Management (3)
Permission of instructor required for non-majors. A broad introduction to financial concepts, issues, tools and vocabulary. Topics include: financial statement analysis, working capital management, budgeting, cost-finding and rate-setting. Fall, spring and summer. Zelman.

HPAA 251 Management Accounting for Health Administrators (3)
Prerequisite: HPAA 250 or permission of instructor. Covers selected topics in managerial accounting applied to health care. Intended to provide in-depth coverage of managerial topics introduced in HPAA 250. Spring. Zelman.

HPAA 252 Financial Management of Health-Care Organizations (3)
Prerequisite: HPAA 250. Advanced financial management concepts and practices in health-service organizations, including working capital management, capital markets, capital structure, capital budgeting and reimbursement implications. Fall. Asper.

HPAA 260 Introduction to Health Policy and Politics (3)
Prerequisite: HPAA 220 or permission of instructor. This course addresses the major political institutions and policy processes that shape health policy, principally at the federal level. Fall. Thorpe.

HPAA 261 Current Issues in Health Policy and Mass Communications (2-3)
[NURS 356] Permission of instructor required. Provides an analytic skill in a real-world context for those who will participate in the broad process of policy formulation through their positions in the health professions and mass communications fields. Spring. Milio.

HPAA 262 Public Policy and the Politics of Health (3)
[HBHE 230] The course objectives are to identify an ecological view of modern health problems and its implications for health-policy development and to analyze the effectiveness of major health promotion strategies. Spring. Milio.

HPAA 263 Quality and Utilization Management (3)
Prerequisite: HPAA 220. Evolution and current status of health-care quality management systems and programs for utilization control. Includes discussion of alternative quality assurance methods, hospital accreditation and government programs. Spring. DesHarnais.

HPAA 264 Methods of Quality Control (3)
Prerequisite: HPAA 220. Methods and practices for quality control and assurance in health-care organizations. Spring. DesHarnais, Simpson.

HPAA 265 Health Policy Issues Analysis (3)
Prerequisite: HPAA 220 or permission of instructor. A framework for analysis is developed and applied to three major health policy issues, e.g., medical-care rationing, role of public health or technology assessment. Fall. Simpson.

HPAA 270 Health Economics for Policy and Administration (3)
Prerequisite: BIOS 110. Permission of instructor required for non-HPAA majors. Provides training in the theory of health economics and applies this theory to important issues in health policy and administration. Spring. Stearns, Hahn.

HPAA 270L Microeconomics Laboratory (1)
Corequisite: HPAA 270. Permission of instructor required for non-HPAA majors. A brief summary of microeconomic theory used in Health Economics for Policy and Administration (HPAA 270). Spring. Staff.

HPAA 271 Study Design and Regression Analysis (3)
Prerequisite: BIOS 110 or equivalent, or permission of instructor. The purpose of this course is to familiarize the student with the tools of policy analysis and to provide hands-on experience in using quantitative policy tools. Fall. Stearns, Biddle.

HPAA 272 Methods for Health-Policy Analysis and Planning(3)
Permission of instructor required for non-HPAA majors. Concepts and methods of health-policy analysis and planning. Course includes conceptual modeling, graphical data presentation, needs assessment, goal and objective group decision methods and economic evaluation. Spring. Simpson.

HPAA 273 Structural Equation Models (3)
[SOCI 209] Prerequisite: SOCI 208 and permission of the instructor. Specification, identification and estimation of structural models. Attention to regression analysis and its extensions, multi-equation modeling and models with unobserved variables and measurement error. Exploratory and confirmatory factor analysis. Fall. Bollen.

HPAA 274 Analysis of Categorical Data (3)
[SOCI 211] Permission of instructor required. Introduction to techniques and programs for analyzing categorical variables and nonlinear models. Special attention is given to decomposition of complex contingency tables, discriminant function analysis, Markov chains and non-metric multidimensional scaling. Spring. Bollen.

HPAA 275 Analytic Techniques in Health Policy and Administration (3)
Prerequisites: BIOS 110 and permission of instructor. Covers a variety of analytic techniques and methodologies basic to more advanced analysis of decision problems in health administration. Fall. Parker.

HPAA 276 Research Management and Ethics in Health Policy (1)
A seminar on managing research (managing people, money, time, etc.) and dealing with the full range of ethical issues relevant to conducting research. Spring. Brooks.

HPAA 279 Competition, Regulation and Insurance (3)
Prerequisites: HPAA 270 and HPAA 271. Permission of instructor required for non-HPAA majors. Examines alternative approaches to containing health-care costs adopted by public and private payers. Specific topics include rate regulation of hospitals, competitive bidding and selective contracting, managed care and physician payment. Fall. Thorpe.

HPAA 280 Legal Problems in Health Facility Administration (3)
Prerequisite: HPAA 180. Readings, cases and discussion of the legal and ethical aspects of delivery of health-care services in the hospital setting. Spring. Gilbert.

HPAA 285 Ethical Issues in Health Policy and Politics (3)
Prerequisite: HPAA 260 and permission of instructor. The course considers ethical issues arising in current health policy. Some of the topics to be considered are abortion and sex education, the rights and treatment of seriously defective newborns, etc. Fall. Staff.

HPAA 300 Doctoral Seminar in Health Policy and Administration I (3)
Prerequisite: Doctoral standing. Readings and discussions of various aspects of health services. Special emphasis is given to the interrelationships of administrative and organizational theory to selected health-service topics. Fall. Veney.

HPAA 301 Doctoral Seminar in Health Policy and Administration II (3)
Prerequisites: Doctoral standing and HPAA 300. Continuation of HPAA 300. Spring. DesHarnais.

HPAA 304 Seminar in Teaching Health Policy and Administration (3)
Problems and processes of teaching health policy and administration, including supervised practicum experience. Fall and spring. Staff.

HPAA 305 Selected Topics in Health Policy and Administration: Advanced Seminar (3)
Permission of instructor required. Integrated study of selected theory and research as it relates to the organization and delivery of health services. Fall and spring. Staff.

HPAA 306 Special Problems in HPAA (3)
Prerequisites: Doctoral standing, permission of instructor and permission of director of doctoral program. Examination of special problems in health policy and health administration studies. Fall, spring and summer. Staff.

HPAA 307 Selected Readings in HPAA (3)
Prerequisites: Doctoral standing, permission of instructor and permission of director of doctoral program. Examination of selected readings in health policy and administration. On request. Staff.

HPAA 308 Directed Research in HPAA (3)
Prerequisites: Doctoral standing, permission of instructor and permission of director of doctoral program. Examination of directed research topics in health policy and health administration. On request. Staff.

HPAA 311 Advanced Studies in Population Policy and Programs (3)
Prerequisites: HPAA 211 or equivalent and permission of instructor. Individualized studies on special problems in population policy analysis and family-planning program development. Spring. Freymann.

HPAA 330 Doctoral Seminar in Organization Theory and Health-Service Organizations (3)
Prerequisite: Doctoral standing; HPAA 130 or equivalent. Permission of instructor required. Review and application of selected developments in organization theory to health services research. Fall. Kaluzny.

HPAA 350 Managerial Topics in Health-Care Financial Management (3)
Prerequisite: HPAA 250 and permission of instructor. Course brings together organizational, financial and marketing concepts. Master's students are required to apply concepts to an actual organization by developing a business/marketing plan. Fall. Zelman.

HPAA 351 Topics in Health-Care Finance (3)
Prerequisites: HPAA 250 and permission of instructor. Analysis of topics of current interest in financial management of health-care organizations. May include project selection, endowment stewardship, access to capital. Spring, alternate years. Staff.

HPAA 360 Policy Seminar in Health Policy and Administration (1-6)
Seminar on policy issues in health policy and administration. Fall and spring. Staff.

HPAA 371 Advanced Methodology in Health Policy and Administration Research (3)
Prerequisites: HPAA 273, HPAA 274 and permission of instructor. Research methodology as applied to understanding problems in health-care delivery. Topics will include simultaneous equation models, factor analysis, limited dependent variables and an introduction to event history analysis. Fall and spring. Stearns. Veney.

HPAA 372 Advanced Topics in Health Economics I (3)
Prerequisite: HPAA 270. This course provides a detailed assessment of current health-policy issues from an economics perspective. Potential topics include cost-effectiveness analysis, health insurance, etc. Fall and spring. Stearns, Thorpe.

HPAA 373 Advanced Topics in Health Economics II (3)
Prerequisites: HPAA 270 and HPAA 372. This course is a continuation of HPAA 372 in providing a detailed assessment of current health-policy issues from an economics perspective. Fall and spring. Stearns, Thorpe.

HPAA 390 Advanced Concepts and Applications in Health Policy and Administration (3)
Corequisite: Graduate standing in HPAA and completion of master's core. Integrating and building upon the HPAA master's core, this comprehensive course focuses on organization policy-making and administration from the perspectives of the CEO and top management. Spring. Files, Porto.

HPAA 392 Master's Paper (0-3)
Fall, spring and summer. Staff.

HPAA 393 Master's Thesis (1-6)
Staff.

HPAA 394 Doctoral Dissertation (0-9)
Staff.

HPAA 400 General Registration (0)
Staff.

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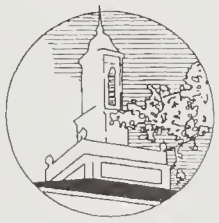

Maternal & Child Health

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Peter R. Lamptey
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Kevin J. Ryan
William M. Sappenfield
Shyam Thapa
Mary E. Vernon

Lecturer
Michael F. Durfee

Maternal & Child Health

The Department of Maternal and Child Health is strongly committed to improving the health of women, children and their families through programs of education, research and community service.

The educational mission of the department is to prepare physicians, nurses, social workers and others for public health leadership positions that are related to such areas as maternity care and family planning; child care and development; comprehensive family-centered health care; aspects of consumer and community development; policy, financing and legislation; and international maternal and child health. A favorable faculty-student ratio is maintained, with learning experiences enhanced by the multi-disciplinary composition of faculty and students.

A rich variety of inter-disciplinary programs in the area provides opportunities for students to develop special interests. These include the Health Services Research Center; Carolina Population Center; Clinical Center for the Study of Development and Learning; Frank Porter Graham Child Development Center; Area Health Education Centers; North Carolina State Department of Environment, Health and Natural Resources; Family Health International, a rural program of community development and comprehensive health services; and health programs for rural areas and immigrants.

UNC-CH News Services/ Will Owens

Students with interest in the broad field of maternal and child health pursue a program leading to the Master of Public Health (MPH) degree. Students having a special interest, such as family planning and population studies or child care and development, may follow a more specialized program which leads to the Master of Science in Public Health (MSPH) degree. Programs usually cover two 16-week semesters and a 12-week summer period, although longer programs may be necessary.

A joint degree program with the Division of Special Education prepares professionals to work with handicapped newborn infants, young children and their families in the context of the total community health-care system. Graduates of this two-year program receive the MA in Education and the MPH.

A cooperative, dual degree plan of study with the School of Social Work is available to those wishing to obtain concurrently their professional degree in social work and a master's degree in public health with specialization in maternal and child health. Graduates of the two-full-year course of study receive the MSW and MPH.

Course sequencing restrictions recommend students to enter the master's program in the fall semester.

Core and elective courses and field work are the major elements of each program. Knowledge of biostatistics, epidemiology, factors related to the delivery of health services and an understanding of the ways that biologic, environmental, social and behavioral factors affect health are required of all students. Foundation courses in maternal and child health are also required. Electives may be drawn from many departments of the University. Community-based learning experiences are an integral part of the educational program, with field work assignments individually tailored by the student and faculty advisor.

Departmental courses focus on service and financing programs for mothers, children and

families, and include the historical development, content, characteristics, planning and evaluative processes. Biologic, socio-cultural and psychological factors are considered as they relate to health needs and problems of maternal-infant health and family planning. Child health problems are given high priority, with opportunity provided to integrate this knowledge with techniques of program planning, implementation and evaluation. Skills in advocacy, interdisciplinary teamwork, consultation and research utilization are also taught by the department.

All students who enroll in the MPH or the MSPH degree programs must meet University requirements for admission to the Graduate School. In addition, the department admits students who hold prior degrees in the health professions listed below, whose career goals are firmly based in fields related to maternal and child health:

(1) Medicine – MD or equivalent; consideration is also given to medical students who may exercise an option to complete medical and public health study concurrently and to physicians who are engaged in residency training or other post-doctoral study who wish to complete public health study simultaneously;
(2) Nursing – Clinical master's degree in maternity or pediatric nursing, preparation in an approved program of nurse-midwifery or preparation as a nurse practitioner in a relevant practice area or a Bachelor of Science in nursing with at least two years of community health experience;
(3) Social Work – Master of Social Work;
(4) Other – Professional degrees in dentistry, physical or occupational therapy, education and other related fields.

Preference is given to health professionals with at least two years of community health experience.

Applicants who hold baccalaureate degrees in a broad range of other related academic fields are considered for admission provided they have been employed for at least two years in a community health-related position and have firm educational and career goals.

Traineeships are available covering tuition, fees and reasonable living expenses for some students, particularly those with an advanced degree in one of the health professions.

The DrPH in maternal and child health is offered for selected individuals who have previously earned a master's or equivalent degree in a related field. The DrPH program provides an opportunity for intensive study of the biologic, cultural and environmental factors influencing the health of mothers, children and their families; the development of investigative skills; and the application of knowledge, skills and techniques to the improvement of the health of mothers and children. Students indicate upon application which substantive area they wish to pursue in doctoral study. A minimum of two academic years of coursework and directed research is required. In addition to required MHCH courses, other curriculum requirements include biostatistics and epidemiology, and an additional minimum of 18 semester hours as determined by the student's doctoral committee.

MHCH 103 Reproductive Physiology and Conception Control (2)
Human sexuality, reproductive physiology, methods of regulation, pregnancy, fetal wastage, infertility, sterilization, abortion and community responsibilities discussed. Fall. Hulka.

MHCH 105 Current Issues and Advances in Developmental Disabilities (3)
[SOWO 105] Permission of instructor required. Seminar that will enable students and experts in developmental disabilities to exchange ideas and explore controversial topics. Seminar will address current research and policies which affect service delivery for persons who have developmental disabilities. Fall and spring. Staff.

MHCH 110 Demography of Women and Children in Developing Countries (2-3)
Permission of instructor required for non-majors. Introduction to basic population concepts and measures, emphasizing demographic indicators of health and social status of women and children in developing countries. Spring. Tsui.

MHCH 125 Injury as a Public Health Problem (3)
[HBHE 125] Pre- or Corequisite: EPID 160. This course considers the causes and consequences of traumatic injury within developmental, social and economic contexts and dilemmas in injury prevention. Injuries associated with transportation, violence and the home and occupational environments are included. Three lectures per week. Spring. Runyan, Kotch.

MHCH 140–142 Problems in Maternal and Child Health (1-3)
Prerequisites to be arranged with the faculty in each individual case. Fall, spring and summer. Staff.

MHCH 200 Issues in Maternal and Child Health (3)
For students outside the department who desire a survey of current issues and programs in maternal and child health. Emphasis is on contemporary approaches to problems and services affecting children and families. Two lecture and two seminar hours per week. Fall and spring. Staff.

MHCH 201 Child Development and Social Policy (3)
Permission of instructor required. Analysis of prevailing social policies as they relate to principles of child development; overview of child development and case studies on federal policies affecting children and families. Spring. Staff.

MHCH 202 Comparisons of MHCH Policies in Industrialized Nations (1-2)
Permission of instructor required for non-majors. Seminars center on student reports of MHCH policy, programs and health outcomes among leading industrialized nations. Fall and spring. Miller.

MHCH 203 Introduction to Managing MHCH Programs (2)
Permission of instructor required for non-majors. Course provides students with frame of reference for coping with environmental forces that shape the delivery and organization of maternal and child health and with skills that enable them to function effectively with internal and external complexities. Two lecture hours a week. Fall or spring. Browne.

MHCH 205 International Family Planning (3)
Permission of instructor required for non-majors. Analysis of the family-planning movement, its policies, operations and research, with emphasis on the Third World. Three lecture hours a week. Fall and spring. Tsui.

MHCH 206 Perinatal Health Services (3)
Prerequisites: MHCH 210 and EPID 219. Permission of instructor required for non-majors. Evaluation of local, state and national interventions to improve perinatal health. Topics will include effectiveness of prenatal care, regionalization, risk assessment, racial disparities, linkages with Medicaid, etc. Fall and spring. Kotelchuck, staff.

MHCH 207 International Maternal and Child Health: Community Skills (3)
Permission of instructor required for non-majors. MHCH skills for working in developing countries: participatory research, risk communication and grant-proposal writing. Three lecture hours per week. Spring. Zapata.

MHCH 208 Concurrent Field Training in Maternal and Child Health (1-4)
For MHCH-majors only. An elective faculty-supervised field experience in community maternal and child health services in relation to background of experiences, special interests and future professional plans. Variable number of laboratory hours per week. Fall, spring and summer. Staff.

MHCH 210 Maternal and Infant Health (3)
Permission of instructor required for non-MHCH majors. Knowledge base, social strategies and health policies that relate to the health and well-being of women of childbearing years, neonates and families. Three lecture hours a week. Fall. Miller, staff.

MHCH 210L Maternal and Infant Health Laboratory (1)
Corequisite: MHCH 210. Permission of instructor required for non-MHCH majors. In-depth exploration of specific topics from MHCH 210. Fall. Staff.

MHCH 211 Child and Family Health (3)
Prerequisite: MHCH 210. Permission of instructor required for non-MHCH majors. This course addresses major issues in child and adolescent health including interactions among children, their families and the environment. Following a developmental paradigm, emphasis is given to preventive public-health services. Three

lecture hours a week. Spring. Kotch, staff.

MHCH 211L Child and Family Health Laboratory (1)
Prerequisite: MHCH 210. Corequisite: MHCH 211. Permission of instructor required for non-MHCH majors. Required small-group presentation and in-depth discussion of topics covered in lecture. Students will choose two consecutive groups depending upon availability of leader. Spring. Staff.

MHCH 212 Seminar on the Family (1)
[PHNU 212] Permission of instructor required. Family theory, research and assessment; family relationships and environments that influence adult and child health and development; professions and institutions that influence family functioning. Two seminar hours a week. Spring and summer. Staff.

MHCH 213 Research and Evaluation Methods in Maternal and Child Health (3)
Permission of instructor required for non-MHCH majors. The art and science of MHCH research and evaluation. Focuses on assessment of MHCH-population characteristics, secondary data analysis and the evaluation of MHCH programs. A practicum-based course. Three hours per week. Spring. Tsui, Martin.

MHCH 213L Research and Evaluation Methods in Maternal and Child Health (1)
Prerequisite: MHCH 213. Permission of instructor required for non-MHCH majors. Companion course to MHCH 213. Introduces students to statistical analysis using SAS-PC and microcomputers. Spring. Tsui.

MHCH 214 Field Training in Maternal and Child Health (2-8)
Required of selected students in terms of their background of experience, special interest and future professional plans. Field fee: $350. Summer, 6-10 weeks. Staff.

MHCH 220 Organization of Services for Children with Special Needs (3)
This course focuses on the design, organization and implementation of services for children with special needs. Participants will analyze the range of services needed by these children. Spring. Farel.

MHCH 222 Issues in International Maternal and Child Health (2)
Permission of instructor required for non-MHCH majors. Course will focus on key issues of mothers and children primarily, but not exclusively, in the developing world. Topics include primary health care, measurement and indicators of health status, levels and patterns of maternal and child morbidity and mortality, major programmatic intervention, oral rehydration therapy and national policy orientations towards the health needs of these two groups. Fall. Zapata.

MHCH 224 School-Age Population: Health Problems and Programs (3)
[PHNU 224] Permission of instructor required. Health needs and problems of school-aged population. Development and evaluation of programs to meet these needs including examination of legislative mandates, administrative structures and manpower utilization. Spring. Staff.

MHCH 225 Practicum: Leadership in School Health Programs (1-4)
[PHNU 225] Prerequisites: MHCH 224 or equivalent and permission of instructor. An elective, individually planned and supervised school-community based field experience. Designed to provide leadership experiences in delivery of school health services. Three to 12 laboratory hours per week. Spring. Staff.

MHCH 226 Adolescent Health (3)
[HBHE 189, PHNU 226] Topics covered include the epidemiology of health problems, developmental issues, health services and psycho/social influence on adolescent problem behaviors. Course material will be useful for research generation and practical application. Three seminar hours per week. Spring. Foshee.

MHCH 227 Women's Health: A Life Cycle Perspective (2)
[EPID 227] Permission of instructor required for non-majors. Survey of the sources and causes of morbidity and mortality among women from birth to extreme old age. A goal is to highlight subject areas historically under-researched and under-serviced. Fall. Zapata, Newman.

MHCH 246 Public Health Program Planning and Evaluation (4)
[PUBH 246, PHNU 246, HPAA 246, HBHE 246] Prerequisite: Two years work experience. Permission of instructor required for non-majors. Fundamentals of public health program planning and evaluation with emphasis on applications in neighboring communities and writing proposals for project funding. Three lecture hours and one lab hour. Spring. Peoples-Sheps, Eng, Foshee.

MHCH 254 Social Work in Public Health (3)
Permission of instructor required for non-majors. Analyzes role and functions of social workers in public health with emphasis on multi-disciplinary practice. Focus is on planning social work component of health program. Observational visits to selected sites. Fall. Telfair.

MHCH 260 Conceptualization, Design and Measurement (3)
Prerequisites: Knowledge of SAS, MHCH 213 or equivalent. Permission of instructor required for non-MHCH majors and master's students. Analytic skills seminar focusing on study design and measurement following a research project from the formulation of a research question to the design, research methodology and measurement selection and analysis. Fall. Martin.

MHCH 261 MHCH Secondary Data Analysis (3)
Prerequisites: Knowledge of SAS, MHCH 213 or equivalent. Permission of instructor required for non-MHCH majors and master's students. Analytic skills seminar focusing on the use of secondary data analysis for MHCH evaluation and planning. Spring, alternate years. Kotelchuck, Martin.

MHCH 262 MHCH Program Evaluation (3)
Prerequisite: Knowledge of SAS, MHCH 213 or equivalent. Permission of instructor required for non-MHCH majors and master's students. Analytic skills seminar focusing on the theory and practice of MHCH program evaluation. Examples of MHCH program evaluations will expose students to all phases and issues surrounding MHCH program evaluation (including conceptualization, negotiations, management operations, analytic strategies implementation, presentation, etc.) Spring. Kotelchuck, Martin.

MHCH 300 Doctoral Seminar in Maternal and Child Health (2)
Permission of instructor required for non-MHCH majors and master's students. This seminar explores the major MHCH policy and philosophical controversies and dilemmas that provide the paradigms for maternal and child health policy development. Fall. Margolis.

MHCH 301 Doctoral Seminar in Maternal and Child Health (2)
Prerequisite: MHCH 300. Permission of instructor required for non-MHCH majors and master's students. Seminar explores the origins of and developments in major maternal and child health policies and programs to understand their effects on the health of mothers and children. Spring. Margolis, Bennett.

MHCH 302 Doctoral Research Skills Colloquium (1)
Prerequisite: Enrollment in MHCH doctoral program. Permission of instructor required for non-majors and master's students. This is the first semester of a two-year research skills colloquium for all new doctoral students. The course will address research, problem definition, proposal design and development. Fall and spring. Staff.

MHCH 309 Issues of Advocacy in Maternal and Child Health (3)
Permission of instructor required. Examines the advocacy as a process for influencing policies affecting mothers and children. Spring. Browne.

MHCH 315 Seminar in Maternal and Child Health (2)
Permission of instructor required for all non-majors. This seminar provides an opportunity for students and faculty to explore in greater depth selected subjects within the field of maternal and child health. Four seminar hours a week. Summer. Staff.

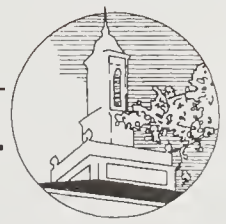
MHCH 340 Maternal and Child Health Doctoral Internship (1)
Prerequisite: Enrollment in MHCH doctoral program. MHCH internship to enhance doctoral training in areas of research, teaching and practice. Fall, spring and summer. Staff.

MHCH 392 Master's Paper (1-4)
Open to majors only. Fall, spring or summer.

MHCH 393 Master's Thesis (3-6)
Fall and spring.

MHCH 394 Doctoral Dissertation (3 or more)
Fall and spring.

MHCH 400 General Registration (0)



Nutrition

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[1] Professor as of July 1, 1993

Nutrition

Unique in the United States, the Department of Nutrition is located in both the School of Public Health and in the School of Medicine. A broad curriculum in public health sciences is provided as well as courses in the physiological, biochemical and behavioral aspects of nutrition and their application to the health of human populations. The programs currently offered lead to the Bachelor of Science in Public Health (BSPH), the Master of Public Health (MPH), the Doctor of Philosophy (PhD) and the Doctor of Public Health (DrPH) degrees.

The objective of the BSPH program in nutrition is to provide undergraduate training for students wishing to enter beginning-level positions in community and public health nutrition or to pursue graduate training in nutrition, medicine or dentistry. Application procedures and program descriptions may be found in this catalog and in *The Undergraduate Bulletin.*

Applicants for all graduate programs should have a "B" average or better and are required to submit Graduate Record Examination (GRE) scores. Applicants whose native language is not English are required to take the Test of English as a Foreign Language (TOEFL) in addition to the usual requirements. A brief autobiographical letter which states the person's reason for applying to this degree program and his/her future career goals is required. Graduates in medicine and dentistry are encouraged to apply for admission to the programs and may submit Medical or Dental Aptitude Tests scores in lieu of GRE scores.

Cliff Haac

Prerequisites for graduate programs include the equivalent of four semesters (two academic years) of the biological sciences (a course in anatomy and physiology and microbiology required), two semesters (one academic year) of chemistry (organic chemistry required), one biochemistry course, two courses in social sciences (such as anthropology, psychology or sociology) and one introductory course in human nutrition. An introductory course in economics is also recommended for MPH applicants. An introductory biostatistics course is also recommended for PhD applicants. Deficiencies in course prerequisites must be rectified prior to admission.

The coordinated master's program in Public Health Nutrition leads to the MPH degree and eligibility to take the dietetic registration examination. The program offers broad training in the field of public health, including coursework as well as supervised clinical and public health experiences. The curriculum provides graduates with knowledge and skills in nutrition science and clinical nutrition, nutrition and behavior and public health science and management.

To achieve these goals the MPH program is designed to permit each student to gain a strong background in the science and practice of public health. Students take the core courses required by the School as stated in this catalog. They are also expected to acquire a sound knowledge of the science of human nutrition. A working knowledge of community nutrition programs and services coupled with adequate opportunities for concurrent and block field experience are used to further strengthen classroom and laboratory experiences.

Students must pass a written comprehensive examination. This examination covers and integrates the general areas of biological and clinical aspects of nutrition, behavioral aspects of food and nutrition, nutritional epidemiology and public health nutrition programs and policy. Students are advised to consider these examination foci in their selection of elective courses in nutrition and other disciplines.

The PhD degree program will prepare graduates for leadership in academic and related

settings which emphasize teaching and research. PhD students will conduct original research and their degree will culminate in a dissertation which expands the boundaries of basic nutrition knowledge, theory or methodology. There are three major training divisions: nutritional biochemistry, applied public health nutrition and population-based nutrition.

The DrPH degree program provides advanced training in the application of nutritional science to public health practice, with an emphasis on competence in policy analysis and leadership in program administration. This degree prepares graduates for leadership positions in nutrition and public health policy in state, federal and international agencies and the teaching of nutrition or community nutrition at the undergraduate or graduate levels. Persons selecting this option must have had considerable experience in public health agencies.

Required departmental core courses are the same for the PhD and DrPH. However, students opting for the DrPH and who do not already hold a master's degree in public health must fulfill School of Public Health requirements for the MPH degree as well. Following satisfactory completion of the doctoral written and oral examinations, the student proceeds with a research project and dissertation under the guidance of an advisor and doctoral faculty committee. Applicants to all programs are encouraged to arrange a personal interview whenever possible.

UNC-CH News Services/ Dan Sears

NUTR 40 Introduction to Human Nutrition (3)
Human nutrition and relationship to health and disease processes. Presented as an integrated body of knowledge derived from several disciplines. Functions and sources of humans' food. The relevance of nutrition to individual well-being, social welfare and economic development. For undergraduate students who do not intend to major in nutrition. Fall. Anderson.

NUTR 98 Undergraduate Research Experience in Nutrition (3)
Permission required from faculty research director. For undergraduates enrolled in the department's baccalaureate degree program. Directed readings or laboratory study on a selected topic. May be taken more than once for credit. Fall, spring and summer. Staff.

NUTR 99 Honors Research in Nutrition (3)
Permission required from faculty research director. Directed readings or laboratory study of a selected topic. Requires a written proposal to be submitted to and approved by BSPH Committee and faculty research director. A written report is required. May be taken more than once for credit. Six laboratory hours per week. Fall, spring and summer. Staff.

NUTR 100 Introduction to Medical Nutrition (3)
Prerequisites: CHEM 11, 21 and BIOL 11 or equivalents or permission of instructor. Function of the human body focusing on nutrient interaction. Review of structure and function of cells and organs. For advanced undergraduates and graduate students needing to enhance background prior to NUTR 110. Spring. Switzer.

NUTR 101 Aging and Human Development (3)
[HBHE 101, HPAA 124, PHNU 124] Lectures concerned with biological, physical, emotional, demographic and social aspects of aging. Field trips to institutions and home visits. Fall. Staff.

NUTR 110 Nutritional Biochemistry and Normal Cell Function (3)
Prerequisites: NUTR 100, CHEM 11, 21 and BIOL 11 or equivalent. Covers normal cell biochemistry and physiology, emphasizing roles of nutrients throughout the life cycle; chemistry and metabolism of proteins, nucleic acids, carbohydrates and lipids; endocrine/neuroendocrine regulation of metabolism. Fall. Louie.

NUTR 111 Nutrition of Children, Mothers and the Elderly (3)
Prerequisite: NUTR 100 or equivalent. Corequisite: NUTR 110. Biologic bases for nutrient requirements and dietary recommendations as they vary throughout the life cycle. Covers the nutritional needs of women during childbearing years, infants, children, adolescents and aging adults. Fall. Adair.

NUTR 120 Nutritional Biochemistry and Disease Processes (3)
Prerequisite: NUTR 110. Covers biochemistry and pathophysiology of diseases with emphasis on roles of nutrients in prevention causation and/or therapy. Materials from prerequisite used as basis for study of molecular mechanisms responsible for disease processes. Spring. Anderson.

NUTR 121 Clinical Applications: Diet Therapy (3)
Corequisite: NUTR 120. Course designed to examine the rationale and implementation of diet therapy and nutrition support in the prevention or treatment of disease. Spring. Barrett, Anderson.

NUTR 130 Food Ecology (2)
Prerequisite: NUTR 40 or equivalent. Social, economic, cultural and psychological influences on food consumption patterns and food habits of individuals throughout the human life cycle are examined from a theoretical perspective. Fall. Kirkley.

NUTR 131 Food Ecology Applications (1)
Pre- or Corequisite: NUTR 130. Application of topics covered in NUTR 130 using the case-study method. Fall. Kirkley.

NUTR 132 Dietary Change in Individuals (3)
Prerequisite: NUTR 40 or equivalent. Functions of a nutritionist working with individuals, emphasizing interviewing, assessment, nutrition care planning, counseling and service documentation in prevention and therapeutic situations. Practice in the use of current dietary analysis software programs and development of educational materials included. Spring. Barrett.

NUTR 140 Food Science and Processing (4)
Prerequisite: NUTR 100. Introduction to foods important in the American diet. Factors influencing selection, packaging, safety and preparation of foods, menu planning and meal preparation. Laboratory fee: $25. Three lecture hours and three laboratory hours per week. Fall. Barrett, Carroll.

NUTR 141 Food Service Systems Management (3)
Permission of instructor required for non-majors. Basic concepts of institutional food service systems management applied to small and medium-sized health care facilities in the community. Two lecture hours and two laboratory hours per week. Fall and spring. Chegash.

NUTR 150 Nutrition Policy and Programs (2)
Prerequisite: NUTR 40. Introduction to program and policy approaches for improving nutritional status of populations. Broad basis and rationale for nutrition policy introduced. Design, implementation of relevant food, nutrition, health programs examined. Spring. Haines.

NUTR 170 Readings in Nutrition (1-9)
Permission of instructor required. Reading and tutorial guidance

in special areas of nutrition. Fall, spring and summer. Staff.

NUTR 190 Nutrition Research (1-9)
Permission of instructor required. Individual arrangements with faculty for bachelor's and master's students to participate in on-going research. Fall, spring and summer. Staff.

NUTR 210 Nutrition Assessment (1-3)
Prerequisites: NUTR 100 or permission of instructor. This course is taught as three independent one-credit modules. Dietary Assessment (theory and rationale of nutritional assessment in individuals and populations; one credit). Anthropometric Assessment (one credit). Clinical/Laboratory Assessment (one credit). Spring. Switzer.

NUTR 220 Clinical Nutrition Experience (0-6)
Prerequisites: NUTR 120, 121, 132. Students are assigned to medical facilities where, under supervision of registered dietitians, they participate in the nutritional care of patients. Field fee: $450. Forty hours per week for 12 weeks. Summer. Barrett and field preceptors.

NUTR 230 Dietary Change Interventions (3)
Prerequisites: NUTR 130, 150. Focus on developing theory-based nutrition interventions at the population level. Addresses levels of interventions such as schools and work sites; methods of implementation including social marketing and mass media; curriculum analysis and principles of assessing change. Spring. Campbell.

NUTR 250 Public Health Nutrition Management I (4)
Prerequisite: NUTR 150. Addresses roles and functions of the health-care team and nutritionist in providing nutrition services at the community level. Includes community assessment and organization, quality assurance and program evaluation and basic personnel management. Three lecture hours and one-day concurrent field experience per week. Fall. Ammerman, Haines.

NUTR 251 Public Health Nutrition Management II (4)
Prerequisite: NUTR 250. An overview of the planning and management of local, state, federal and voluntary public health nutrition programs. Examines legislative and administrative structures. Includes grant-writing for program development. Three lecture hours and one-day concurrent field experience per week. Spring. Dodds, Kirkley.

NUTR 252 Public Health Field Experience (4)
Prerequisite: NUTR 251. During a consecutive eight-week block of time, students are assigned to a state, local or district health agency or other appropriate agency for supervised field experience. Field Fee: $450. Fall, spring and summer. Dodds, Switzer.

NUTR 253 National Nutrition Issues (1)
Prerequisite: NUTR 251 or permission of instructor. Three-day in-depth seminar held in Washington, DC on national nutrition issues, policy formulation and program development with key congressional staff, federal agencies' staff and pertinent public interest/consumer advocacy groups. Paper required. Field fee: $50. Spring. Dodds

NUTR 260 Nutritional Epidemiology (3)
Prerequisites: NUTR 100, EPID 160 or 168 and BIOS 101 or 110; or equivalents. Epidemiology of major nutrition-related public health problems such as infant mortality and chronic diseases. Spring. Kohlmeier, Popkin, Haines.

NUTR 261 International Nutrition (3)
Critical view of the dimensions of world problems in nutrition, with emphasis on micro and macro determinants of malnutrition. Analysis of programs and policies for eliminating malnutrition. Fall. Adair, Popkin.

NUTR 262 International Nutrition: Special Topics (1)
Prerequisite: NUTR 261. Follow up in greater detail of selected issues discussed in NUTR 261. Two seminar hours per week. Spring. Adair.

NUTR 270 Nutrition Research Methods (1)
Pre- or Corequisites: BIOS 101 or 110 and EPID 160 or 168. Introduces essential analytic skills and techniques used in nutrition research. Methodological issues related to measurement, design and analysis of basic, clinical and population-based nutrition studies. Fall. Kirkley.

NUTR 310 Advanced Nutritional Biochemistry (3)
Prerequisite: NUTR 120. Molecular and cellular biology and human nutrition. Includes nutrient regulation of gene expression and protein synthesis, interactions of nutrients/growth factors/hormones /second messengers with metabolism, growth and differentiation and oncogenesis. Fall, alternate years. Louie.

NUTR 320 Advanced Nutritional Biochemistry: Special Topics (3)
Prerequisite: NUTR 120. Biochemical and metabolic techniques are discussed in the context of recent advances in nutritional biochemistry. Topics include stable isotopes and mass spectroscopy, nuclear magnetic resonance, PET scanning and mathematical modelling. Spring, alternate years. Anderson.

NUTR 330 Nutrition and Behavior Research (2)
Pre- or Corequisites: NUTR 130 or permission of the instructor. Measurement and research issues are investigated through a critical review of the literature concerning determinants of dietary intake, theory-based approaches to behavior change, and behavioral responses to nutrient consumption. Fall and spring, alternate years. Kirkley.

NUTR 350 Advanced Nutrition Programs and Policy (2)
Pre- or Corequisite: NUTR 150. Local, state, national and interna-

tional programs and policy approaches aimed toward improving the nutritional status of populations. Broad aspects of nutrition policy and its basis and rationale are covered. Spring, alternate years. Haines.

NUTR 351 Advanced Public Health Nutrition Management (3)
Prerequisite: MPH degree or permission of instructor. Analysis of policy development and management techniques used in the public and private sectors in relevance to development and management of nutrition policy and programs. Spring, alternate years. Dodds, Kirkley.

NUTR 360 Advanced Nutritional Epidemiology (3)
Prerequisites: NUTR 260 or equivalent, BIOS 145 and EPID 160 or 168. Nutrition epidemiology techniques which can be used to study nutrition-related behaviors and nutritional status as both an exposure and an outcome. Spring. Staff.

NUTR 361 Advanced Nutritional Epidemiology Special Topics (3)
Prerequisite: NUTR 360. Focuses on advanced methodological aspects of nutrition epidemiology. Fall, alternate years. Haines.

NUTR 371 Elements of Being a Scientist (3)
Prerequisite: Doctoral students ready to formulate dissertation focus. Focuses on key elements that contribute to a successful career as a scientific researcher. These include scientific presentations, scientific photography and graphics; writing a scientific manuscript and evaluating published manuscripts; grant writing and sources of funding; peer review; use of animals and humans in research; scientific ethics. Fall, alternate years. Zeisel.

NUTR 373 Journal Club (1)
Critical review of current literature in nutritional biochemistry, applied nutrition and population-based nutrition science. Focuses on the development of skills in reviewing and criticizing journal articles. Fall and spring. Adair, Switzer, Kirkley.

NUTR 374 Research Rotations for Nutritional Biochemistry Doctoral Students (1-3)
Three laboratory or research group rotations supervised by Nutritional Biochemistry faculty. Provides a breadth of research experience for students prior to selecting dissertation advisor. Up to six laboratory hours per week. Fall, spring and summer. Coleman.

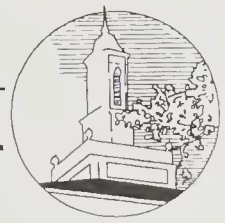
NUTR 375 Nutrition Research (1-9)
Individual arrangements with faculty for doctoral students to participate in ongoing research. Fall, spring and summer. Staff.

NUTR 392 Master's Paper (0-6)
Fall, spring and summer. Staff.

NUTR 393 Masters Thesis (0-6)
Fall, spring and summer. Staff.

NUTR 394 Doctoral Dissertation (0-9)
Fall, spring and summer. Staff.

NUTR 400 General Registration (0)
Fall, spring and summer.



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Jan R. Atwood
Marla E. Salmon

Professor Emeritus
Dorothy M. Talbot

Adjunct Professor
Doris E. Roberts

Associate Professors
Mary Peoples-Sheps
Bonnie Rogers

Associate Professors Emeriti
Nora F. Cline
Elizabeth M. Edmands
Ann C. Hansen
Beatrice B. Mongeau
Julia D. Watkins

Adjunct Associate Professors
Estelle M. Fulp
O. Marie Henry
Helen Jo McNeil
Barbara K. Rimer
Maija Selby

Assistant Professors
Vangie A. Foshee
Jean Kincade Norburn

Assistant Professor Emeritus
Rose G. George[1]

Clinical Assistant Professors
Lorraine B. Johnson
Saundra E. Shay

Clinical Assistant Professor Emeritus
Clara Walters

Adjunct Assistant Professors
Joann C. Biggs
Carol C. Cox
Linda M. Frazier
Linda J. Frederick
Betty B. Griffith
Therese P. Lawler
Elizabeth W. Randall-David
Craig R. Stenberg
Nancy L. Tigar

Adjunct Instructors
Marilyn K. Asay
Janet Braunstein
Patricia K. Bertsche
Dolores S. Brookshire
Christina Harlan
Patricia F. O'Leary-Cunningham
Kathleen P. Paterson
Susan A. Randolph
Emily J. Rivenbark
Catherine J. Staes

Adjunct Clinical Instructors
Karen Mastroianni
Betty S. Winslow

Lecturers
Lou K. Brewer
Elizabeth M. Tornquist

[1] Deceased March 1, 1993

Public Health Nursing

The Curriculum in Public Health Nursing provides graduate study in generalized public health nursing with opportunities to specialize in the area of occupational health nursing. Opportunities are provided for students to participate in faculty members' research, continuing education and technical assistance activities which are conducted throughout North Carolina and the region.

Although full-time enrollment is encouraged, students may choose to enroll part-time. Students are normally admitted at the beginning of the fall semester and must meet the general University requirements for admission to graduate studies. In addition to the general requirements, the Curriculum in Public Health Nursing requires the following:

- A baccalaureate degree with a major in nursing from an NLN-accredited program;
- Evidence of Registered Nurse licensure and one year of work experience;
- Coverage by professional liability insurance;
- Attainment of satisfactory scores on the Graduate Record Examination.

In exceptional cases, persons not meeting all requirements may be accepted for admissio on an individual basis.

The curriculum offers the Master of Public Health (MPH) designed to prepare leaders fo a wide range of roles in public health nursing and occupational health nursing. It also offers the Master of Science (MS) degree with emphasis on preparation for careers in research and teaching in these areas.

The MPH program requires a minimum of one calendar year of study in addition to the master's paper. The MS program requires two academic years and 45 semester credits.

Programs are planned with faculty advisors on the basis of individual experience, needs and career goals. A minimum of 15 credits of public health nursing courses is required.

The program of study in the delivery of public health nursing administration is designed to prepare nurses for collaboration on multi-disciplinary teams in planning, conducting and evaluating community health services and for the design and delivery of public health nursing services. A master's paper on a subject pertinent to public health nursing is required in addition to satisfactory completion of a written comprehensive examination.

The program in occupational health nursing is designed to prepare nurses for positions i advanced practice, consultation, administration or supervision. A master's paper on a subject pertinent to occupational health nursing is required in addition to satisfactory completion of a written comprehensive examination. As part of the UNC Occupational Safety and Health Educational Resource Center (OSHERC), the occupational health nursing program offers an interdisciplinary educational program.

The program leading to the MS degree is designed to prepare nurses for careers in research and teaching related to public health or occupational health nursing. The same subspecialty options available within the MPH program are available within the MS with the same nursing course requirements. A master's thesis is required in addition to satisfactory completion of a written comprehensive examination. Electives are selected to meet individual needs.

The curriculum offers part-time off-campus MPH degree programs at different sites in North Carolina. In this program the student meets the MPH degree requirement of one year's full-time study in three and one-half years on a part-time basis.

PHNU 124 Aging and Human Development (3)
[HPAA 124, HBHE 101, NUTR 101] Lectures concerned with biological, physical, demographic and social aspects of aging. Field trips to institutions and home visits. Three lecture hours per week. Staff.

PHNU 140, 141, 142 Readings in Public Health Nursing (1-3)
Prerequisites to be arranged with the faculty. Reading and tutorial guidance in a selected area of public health nursing or occupational health nursing. Two or more hours per week. Fall, spring and summer. Staff.

PHNU 160 Delivery of Community Nursing Services (3)
Permission of instructor required. Analysis of patterns of organization of community nursing services and relationships to the health care delivery system. Special emphasis on basic management skills and their application. Staff.

PHNU 171 Continuing Education Program Development (2)
Permission of instructor required. Use of systematic approach to educational program development for adult learners. Includes strategies for designing, implementing and evaluating CE and in-service programs. Two lecture hours per week. Fall. Staff.

PHNU 172 Implementation of Continuing Education Programs (1)
Prerequisite: PHNU 171. Permission of instructor required. Application of teaching-learning concepts, principles of adult education and group teaching strategies in the implementation of CE and in-service programs. Two seminar hours per week. Spring. Staff.

PHNU 182 Health Care Services in Occupational Settings (3)
Introduction to population-based health care for workers. Includes major causes of work-related morbidity and mortality, strategies for the team approach and components of occupational health programs. Three lecture hours per week and a plant walk-through. Spring. Staff.

PHNU 185 Topics in Worksite Health Promotion (3)
[HBHE 185] An overview of critical scientific, political, economic, behavioral and other issues as they affect planning, conduct and evaluation of health promotion/risk reduction programs at the worksite. Spring. Staff.

PHNU 190 Psychosocial Aspects of Aging (3)
[HBHE 190, HPAA 190] Permission of instructor required. Psychosocial aspects of the aging process and of old age. Needs of the elderly and their reactions to agencies and programs for the aged. Two lecture and two seminar hours per week. Spring. Mutran.

PHNU 193 Innovation and Change in Public Health Nursing Practice I (3)
Permission of instructor required. Analysis of factors and approaches considered in innovation and change in public health nursing. This includes development of the theoretical base of public health nursing practice. Two lecture and two seminar hours per week. Staff.

PHNU 196 Advanced Practice in Public Health Nursing (3)
Prerequisite: Licensure as registered nurse in North Carolina. Permission of instructor required. Concepts of health promotion/illness prevention applied to families/groups/community. Methods of assessment and intervention. Selected practice experiences. Analysis of case materials. Field fee: $150. One lecture, two seminar and two laboratory hours per week. Staff.

PHNU 201 Special Studies (1-3)
Permission of curriculum chair required. Sections will focus on specific topics of current interest to health workers. Fliers describing the section offering will be distributed prior to registration each semester. Lecture hours per week dependent upon credit. Fall and spring. Staff.

PHNU 212 Seminar on the Family (1)
[MHCH 212] Permission of instructor required. Family theory, research and assessment; family relationships and environments that influence adult and child health and development; professions and institutions that influence family functioning. Two seminar hours per week. Spring and summer. Staff.

PHNU 215 Analysis of Developmental Intervention Programs (2)
Permission of instructor required. Critical review of intervention programs for infants and young children aimed at the prevention of developmental deficits. Examination of rationale for intervention, content and form of program delivery and methods for evaluating effectiveness. One lecture and two seminar hours per week. Fall and spring. Staff.

PHNU 216 Overview of Aging and Chronic Illness (3)
Course will provide a sound understanding of the theories and issues related to the biological, physical, emotional, demographic and social aspects of aging, including population-based risk factors and with emphasis on health promotion. Fall. Norburn, Atwood.

PHNU 217 Developmental Indices of Health Status in Infants and Young Children (2)
Permission of instructor required. Concepts and methods in the early identification of developmentally at-risk populations. Examines issues in reliability, validity and applicability of measurements used in the assessment of early cognitive and social development. One lecture and two seminar hours per week. Fall and spring. Staff.

April Hoyle

PHNU 220 Assessment and Care of Pregnant Women (2)
Theoretical basis of antepartal care emphasizing the concept of risk and assessment of maternal and fetal well-being. Spring. Staff.

PHNU 222 Family Planning Theory: Assessment and Care of Women in the Reproductive Years (1)
For health professionals doing family planning counseling. Includes modes of action effectiveness, contraindication, side effects, complications, advantages and disadvantages of temporary and permanent methods of birth control. On request. Staff.

PHNU 224 School Age Population: Health Problems and Programs (3)
[MHCH 224] Permission of instructor required. Health needs and problems of school-aged population. Development and evaluation of programs to meet those needs, including examination of legislative mandates, administrative structures and manpower utilization. Spring. Staff.

PHNU 225 Practicum: Leadership in School Health Programs (1-4)
[MHCH 225] Prerequisites: PHNU 224 or equivalent and permission of instructor. An elective, individually planned and supervised school/community-based field experience. Designed to provide leadership experiences in delivery of school health services. Three to 12 laboratory hours per week. Spring. Staff.

PHNU 226 Adolescent Health (3)
[HBHE 189, MHCH 226] Topics covered include the epidemiology of health problems, developmental issues, health services and psycho/social influences on adolescent problem behaviors. Course materials will be useful for research generation and practical application. Three seminar hours per week. Spring. Foshee.

PHNU 240, 241, 242 Problems in Public Health Nursing (1-4)
A course for students in public health nursing. Students will make an intensive study of some special problem in public health relevant to public health nursing. The study will result in a paper which will demonstrate the application of research principles. Hours to be arranged. Fall, spring and summer. Staff.

PHNU 246 Public Health Program Planning and Evaluation (4)
[HBHE 246, HPAA 246, MHCH 246, PUBH 246] Prerequisite: Two years work experience. Permission of instructor required for non-majors. Three lecture hours and one laboratory hour per week. Spring. Peoples-Sheps, Eng, Foshee.

PHNU 255 Consultation in Public Health (2-3)
Examination of the practice of case and program consultation in public health settings. Analysis of consultation as a mutual problem-solving process including evaluation. Roles and relationships of consultant and consultee are considered with provision for experiential learning opportunities. Emphasis is on multi-disciplinary practice. Field experience and written report accepted for additional credit hours. One and one half lecture hours per week. Fall and spring. Staff.

PHNU 261 Administration of Community Nursing Services I (3)
Permission of instructor required. Concepts and methods of administering community nursing services. Functions of the nurse administrator in areas of organizing, staffing, program planning, priority setting and evaluation of services. Fall. Staff.

PHNU 262 Administration of Community Nursing Services II (3)
Permission of instructor required. Continuation of PHNU 261. Aspects of fiscal management, personnel management, legal considerations, records and reporting relating to delivery of community nursing services. Leadership styles, motivation and application of administrative processes. Spring. Staff.

PHNU 271 Instructional Approaches in Community Health Nursing (3)
Prerequisites: EDCI 208 and 265 or equivalents. Permission of instructor required. Application of educational theories and curriculum development in nursing education. Study and critique of PHN content in nursing curriculum, of bases and strategies for curricular decisions and instructional approaches. Two lecture and two seminar hours per week. Fall. Staff.

PHNU 272 Practicum in Teaching Community Health Nursing (3-6)
Permission of instructor required. Supervised experience involved in teaching community health nursing to students at the undergraduate level. Problems related to curriculum, organization and faculty roles will be explored under faculty direction. Field fee: $450. One seminar hour biweekly and 18 laboratory hours weekly. Fall and spring. Staff.

PHNU 281 Occupational Health Nursing I (2-3)
Permission of instructor required. Concerns factors influencing the development and operation of occupational health nursing programs. General and special health services contingent on work environment and inherent health problems in the employed populations are considered. Fall. Rogers.

PHNU 282 Occupational Health Nursing II (3)
Prerequisites: PHNU 281. Continuation of PHNU 281. Role components of occupational health nursing with emphasis on designing, implementing and evaluating occupational health programs. Application of principles of toxicology, epidemiology and occupational health nursing. Rogers.

PHNU 283 Occupational Health Nursing, Field Practicum I (1-3)
Pre- or corequisite: PHNU 281. Permission of instructor required. The student will have the opportunity to discuss concepts of OHN practice and the work environment. Concepts related to workplace hazards, interdisciplinary activities and nursing interventions with worker aggregates will be emphasized. Three to nine laboratory hours per week. Rogers.

PHNU 284 Occupational Health Nursing Field Practicum II (1-3)
Prerequisites: PHNU 281, 283. Corequisite: PHNU 282. Permission of instructor required. The student will have the opportunity to learn about the managerial and administrative role of the OHN. Emphasis is placed on analysis of the organizational structure, external influencing factors and evaluation mechanisms. Rogers.

PHNU 293 Innovation and Change in Public Health Nursing Practice II (3-6)
Permission of instructor required. Integration of selected factors of innovation and change into the practice of public health nursing. Practice credit variable. Two lecture, two seminar and zero to nine laboratory hours per week. Fall, spring and summer. Staff.

PHNU 297 Supervision in Public Health Nursing (3)
Permission of instructor required. For public health nursing and other selected students. Philosophy, principles and methods of supervision with emphasis on the supervisor's role in staff development and first-level management. One lecture and four seminar hours per week. Fall and spring. Staff.

PHNU 299 Research Methods in Public Health Nursing (2-4)
Prerequisite: BIOS 101. Permission of instructor required. Analysis of nursing research emphasizing methodology and implications for community health nursing practice. For over two credits, students develop a research design or participate in the research process. Two lecture and two seminar hours for 10 weeks for two credits. Additional proposal development seminars for four credits. Norburn.

PHNU 300 Seminar in Public Health Nursing (3)
Permission of instructor required for non-majors. A departmental core course designed to strengthen knowledge bases and leadership skills important to advanced public health nursing practice. Emphasis is placed on nursing theory and current issues affecting practice. Two lecture and two seminar hours per week. Staff.

PHNU 301 Field Observation of National Community Health Nursing Service (1)
Permission of instructor required. Orientation to national agencies in Washington, D.C. area concerned with community health nursing practice. Supervised visits made to agencies, e.g., The Division of Nursing, HHS, ANA and APHA headquarters. Field fee: $150. Three full consecutive days of field observations and seminars. Spring. Staff.

PHNU 302 Public Health Nursing I (3)
Permission of instructor required for non-majors. A core course designed to strengthen knowledge bases and leadership skills in advanced public health nursing practice. Emphasis is placed on nursing theory, current issues affecting practice and community assessment. Fall. Stevens.

PHNU 303 Public Health Nursing II (3)
Permission of instructor required for non-majors. A core course designed to strengthen knowledge bases and leadership skills in advanced public health nursing practice. Supervised experience emphasizing design and evaluation of public health nursing interventions for population aggregates. Spring. Atwood.

PHNU 340, 341, 342 Research in Public Health Nursing (1-4)
Prerequisite: PHNU 299 or the equivalent and permission of instructor. Independent research in public health nursing under supervision. Two to eight laboratory hours per week. Fall, spring and summer. Staff.

PHNU 360 Advanced Studies in Administration of Community Nursing Services (3)
Permission of instructor required. Integration of theories, concepts, methods of administration and nursing and their application to delivery of community nursing services. Emphasis is placed on roles and functions of the nurse manager. Spring. Stevens.

PHNU 392 Master's Paper (1-6)
Permission of instructor required. A major paper on a problem relevant to public health nursing. This study may extend over more than one semester. Credit is assigned accordingly. Fall, spring and summer. Staff.

PHNU 393 Master's Thesis (3-9)
Fall, spring, and summer. Staff.

PHNU 396 Field Practice in Community Health Nursing (3-9)
Permission of instructor required. Field experience in public health nursing or occupational health nursing practice. Study and observation of selected areas related to student's program of study. Field fee: $450. Three laboratory hours per week for each credit. Fall, spring and summer. Staff.

PHNU 400 General Registration (0)

Public Health Leadership Doctoral Program

The Public Health Leadership Doctoral Program is an interdepartmental curriculum leading to the Doctor of Public Health (DrPH) degree. The program offers a unique doctoral-level concentration in public health leadership for mid-career professionals in local, state and federal public health agencies.

Public health practitioners with a master's degree in public health or related field, at least five years of significant public health experience, demonstrated leadership capabilities and motivation to pursue senior-level public health positions are eligible for the program. Particular efforts are being made to recruit physicians and minorities through highly targeted mass marketing strategies and individualized contacts.

Cliff Haac

The program emphasizes applications of the skills and attributes of leadership through case studies and field experience in the local, state and federal health agencies where fellows are employed. The entire program builds on the experience and knowledge of practicing professions. Each fellow is based in one of the participating academic departments in the School: Health Policy and Administration, Maternal and Child Health or Nutrition.

In addition to taking courses in the home department, fellows take a series of courses on leadership topics, including the new core courses in Community Assessment and Methodology, Public Health Policy Development and Public Health Program Assurance. An integrative seminar emphasizing the interface between leadership attributes and technical skills helps fellows apply theoretical principles to field practice. After one year in residence, fellows return to their agency positions to complete dissertations, which are scholarly examinations of public health practice topics. They maintain frequent contact with faculty mentors and revisit campus for short periods of consultation during the dissertation. The entire program takes about three years to complete.

Further information about the Public Health Leadership Doctoral Program can be obtained by writing to the Public Health Practice Initiative, School of Public Health, University of North Carolina at Chapel Hill, CB#7400 Rosenau Hall, Chapel Hill, NC 27599-7400.

PUBH 140 Readings in Public Health Practice (Variable Credit)
Intensive study of a special problem in public health practice. Fall, spring, summer. Staff.

PUBH 240 Special Issues in Public Health Practice (1-3)
Permission of instructor required. Guided reading, discussions and presentations on current and significant issues in public health. On request. Staff.

PUBH 246 Public Health Program Planning and Evaluation (4)
[HBHE 246, HPAA 246, MHCH 246, PHNU 246] Prerequisite: Two years work experience. Permission of instructor required for non-majors. Fundamentals of public health program planning and evaluation with emphasis on applications in neighboring communities and writing proposals for project funding. Three lecture and one laboratory hour per week. Spring. Peoples-Sheps, Eng, Foshee.

PUBH 300 Leadership Seminar I (2)
Permission of instructor required. Public Health Leadership core course. Application of selected leadership skills and principles. Summer. Staff.

PUBH 301 Leadership Seminar II (2)
Permission of instructor required. Public Health Leadership core course. Application of selected leadership skills and principles. Summer. Staff.

PUBH 302 Leadership Seminar III (2)
Permission of instructor required. Public Health Leadership core course for Public Health Leadership program. Summer. Staff.

PUBH 303 Leadership Seminar IV (2)
Permission of instructor required. Public Health Leadership core course for Public Health Leadership program. Summer. Staff.

PUBH 304 Current Methods of Public Health Analysis (1-3)
Permission of instructor required. Public Health Leadership core course. Update on current methods of biostatistics, epidemiology and automated data management. Summer. Staff.

PUBH 305 Public Health Policy Development I (2-3)
Permission of instructor required. Public Health Leadership core course. Course utilizes case studies to examine social, economic and political context within which public health policy is formulated and operationalized. Summer. Staff.

PUBH 306 Public Health Policy Development II (2-3)
Prerequisite: PUBH 305. Permission of instructor required. Public Health Leadership core course. Course utilizes case studies to examine specific methods of public health policy development. Summer. Staff.

PUBH 307 Community Assessment Methodology (3)
Permission of instructor required. Public Health Leadership core course. Participatory seminar will examine public health tools available for community assessment. A wide range of methods for gathering and analyzing information about the structure, function, resources and perceived needs of a local community. Fall. Staff.

PUBH 308 Public Health Program Assurance (3)
Permission of instructor required. Public Health Leadership core course. Examination of the role of public health agencies in achieving public health goals. Lecture, discussion and case studies are used to identify the legal and public health basis for assurance activities and strategies for implementation and evaluation. Spring. Staff.

PUBH 311 Leadership, Practice and Research I (1-3)
Prerequisites: PUBH 300, 301, 302, 303. Permission of instructor required. Public Health Leadership core course. Examination of the relationships among leadership principles, applied research and public health practice based on participants' experiences. Spring. Staff.

PUBH 312 Leadership Practice and Research II (1-3)
Prerequisite: PUBH 311. Permission of instructor required. Public Health Leadership core course. Analysis of professional accomplishments in leadership, research and public health practice and development of five- and 10-year goals in these areas. Spring. Staff.

PUBH 395 Dissertation Seminar (1-2)
Permission of instructor required. Public Health Leadership core course. This course will facilitate the integration of material from other courses for development of dissertation proposals. Fall, spring and summer. Staff.

Division of Computing & Information Services

Director – Robert C. Schreiner, M.S.

The Division of Computing and Information Services (CAIS) provides a variety of services to the faculty, staff and students of the School of Public Health. Long a part of the Dean's Office, CAIS was organized as a separate Division in 1986.

CAIS services can be categorized as follows:

- Operation of administrative and office automation systems for staff and faculty.
- Access to School, campus and other data communications networks for students, faculty and staff.
- Provision of a Microcomputer Laboratory for educational use. Management of the lab is a collaborative effort with the University's Office of Information Technology/User Services.
- Operation of a printing facility for the University's Office of Information Technology/Computing Services' IBM mainframe.

UNC-CH News Services/ Dan Sears

Computing for School administrative applications and office automation is provided by VAX/VMS, RISC/UNIX and Novell LAN systems. PC and Macintosh software includes a variety of word processing, spreadsheet, data management, presentation graphics and other packages. VAX and RISC systems have Datatrieve and Ingres data base management systems, electronic mail for local and network access and a variety of in-house administrative information systems.

Specialized administrative systems include fiscal, personnel, student, inventory and SPH continuing education management information systems. Some of the systems are developed and maintained in collaboration with the School of Medicine's Office of Information Systems and with the School of Dentistry.

CAIS and the University's Office of Information Technology/User Services offer a variety of short courses ranging from various aspects of word processing to use of the specialized information systems. The School provides a well-equipped training room for hands-on training for CAIS services.

All offices in the McGavaran-Greenberg/Rosenau complex are wired for access to the School of Public Health computers and to the terminal service of the campus broad-band network. Many offices are also connected to the School ethernet and to the campus' extended ethernet. The School of Public Health VAX and RISC systems are members of the Internet network.

The Microlab network includes 32 Zenith 368 PCs and eight Macintosh LC machines housed in two rooms. One room has a projector and may be reserved for classroom use. In addition, with the cooperation of the Health Sciences Library and Davis Graduate Library, the Microlab has five workstations for access to a variety of CD-ROM databases.

All machines have network access to external services such as the UNCLE local MEDLINE system and the University's Info bulletin board.

Division of External Affairs & Community Health Service

Director – Richard M. House, Ed.D.

In recognition of its public responsibility, the School is actively involved in community service throughout the state of North Carolina. The Division of External Affairs and Community Health Service is home to seven offices that work in a number of ways to facilitate the School's research, teaching and service mission. These offices provide direct assistance to agencies and professionals in the field, allowing the School to demonstrate the relevance of teaching and research efforts in current community problems.

The division functions as an interface between the School and its external constituents and helps connect these groups and individuals with appropriate School services and programs. For students interested in community involvement, the division can provide resources ranging from information to financial assistance. Disseminating faculty research; updating the skills of health professionals through continuing education; publicizing school activities and public health issues; and generating financial support from alumni, foundations, corporations and the N.C. Legislature are other ways that the Division serves to link the School and the community.

The **Office of Continuing Education** coordinates the development and implementation of conferences, workshops and seminars for local, state and national public health and human service professionals. These programs have three primary objectives: (1) providing up-to-date information on scientific advances and innovations; (2) reducing the lag time between development of new knowledge and its application in practice and (3) offering short term training in specialty areas not normally available in existing formal educational programs. In addition, the continuing education office assists official and voluntary health agencies, professional associations and other higher institutions of higher education in developing continuing education programs.

The **Area Health Education Centers (AHEC)** activities are designed to decentralize the education of health professionals and to strengthen regional resources for meeting health manpower training needs. Each of the five Health Science schools in the University is linked with the nine regional AHEC offices through a network of coordinators. The AHEC Program Unit for the School is located within the Division. The AHEC network supports technical assistance and continuing education services by the faculty to organizations and professionals across the state.

For students, AHEC provides advice and assistance in locating sites for concurrent and block field training. The Division receives local requests for student assistance via the AHEC regional offices located throughout the state. With knowledge of a student's interests and experience, the Division staff in the School can assist in negotiating a suitable field placement. In addition, the AHEC Program has funds available for student travel and housing during the field training.

The **Office of Development**, also in the Division of External Affairs and Community Health Service, seeks philanthropic support for the School, its departments and its programs from foundations, corporations and individuals. Annual restricted and unrestricted gifts are cultivated and coordinated through this office, and planned giving opportunities are offered to alumni, faculty and friends of the School.

The **Office of Alumni Affairs** assists the School of Public Health Alumni Association (SPHAA) in stimulating continuing interest and professional relationships between the School and its graduates. The office fosters communication among alumni, students and potential students, faculty, other public health practitioners and citizens through social

events, exhibits and general participation at public health association meetings. This office also encourages financial support for the School and the association through the annual fund drive and phonathon and publishes *The Body Politic*, the alumni newsletter.

The **Office of Public Relations** provides a variety of services including media relations; publicity activities; writing, editing and supervision of the printing of school-wide publications; development of marketing materials; management of school-wide special events and research for selected marketing and public relations activities. The office serves as a clearinghouse for information about the School and faculty and as a resource for external constituents who seek information about the School.

The **Office of Governmental Services** works to develop methods to ensure the School's resources and expertise are made available to North Carolina state and local governments. This office works with the staff of the Legislative Service Office to identify areas where faculty of the School might bring specific expertise to the deliberations of the General Assembly and its committees.

The **Environmental Resource Program (ERP)** promotes environmental stewardship and public health by providing a link between the resources of the University and the citizens of North Carolina. Program staff provide technical assistance and training programs for citizen groups, local government officials and school teachers. They develop resource materials for citizens, such as the annual *Guide to North Carolina Environmental Groups* and publish a newsletter, *The Link*. In addition, they plan programs to facilitate discussion and collaborative decision-making about environmental issues among leaders of civic organizations, government and industry. The ERP also provides opportunities for students interested in experiential learning about environmental issues and policy applied research.

Carolina Population Center

Director – Ronald R. Rindfuss, Ph.D.

The Carolina Population Center provides coordination for a University-wide interdisciplinary program in population research and research training. Its efforts span the social, behavioral and health sciences. In addition to the School of Public Health Departments (Biostatistics, Epidemiology, Health Policy and Administration, and Maternal and Child Health), primary population courses are offered in anatomy, anthropology, city and regional planning, economics, geography, psychology and sociology. These courses are selected by the Population Center training committee to represent appropriate opportunities for concentration of studies on population dynamics, policy and research methodology as well as demography.

The Department of Biostatistics provides courses in methods of demographic measurement, analysis and modeling. The Department of Epidemiology deals with population dynamics and family planning, as well as methodology. In the Department of Health Policy and Administration, concentration is in population policy and administration. The Department of Maternal and Child Health is concerned with family planning and human reproduction.

Additional information concerning opportunities for special study in this field may be obtained from the chairs of the departments listed above or from the training office of the Carolina Population Center.

Cecil G. Sheps Center for Health Services Research

Director – Gordon DeFriese, Ph.D.

Established in 1968, the Cecil G. Sheps Center for Health Services Research has organized interdisciplinary research on the structure and impact of health care services delivery systems.

A fundamental interest of the Center has been the interaction between the medical care system and vulnerable populations, such as the elderly, people in poverty, rural residents, minority groups, children, the chronically ill and the mentally ill. Questions about access to care, quality of care, efficacy and effectiveness of care as they affect health-related quality of life are examined in a variety of studies.

The Center continually reexamines its research agenda to ensure that resources are applied to questions of particular importance, with research and evaluation work divided into 11 program areas: Health Professions; Health Care Organizations; Medical Practice; Health Promotion and Preventive Health Services; Mental Health Services; Aging, Disablement and Long-Term Care; Child Health Services; Health Care Economics and Finance; International Health Services; Health Policy Analysis; and Rural Health Services.

Coordinated with its research and evaluation agenda are the Center's efforts in information dissemination, technical assistance and education. With nearly 25 years of health care research and policy analysis experience, there are many opportunities for those interested in using Center-sponsored research as the source of data for their own investigations, and the Center stands ready to be of assistance to students and faculty with interests in these issues.

Center for Health Promotion & Disease Prevention

Director – Alan W. Cross, M.D.

The UNC Center for Health Promotion and Disease Prevention was established in March 1985, and is sponsored by all five schools in the Division of Health Affairs of the UNC-CH campus (Public Health, Dentistry, Medicine, Nursing and Pharmacy).

The purpose of the Center is to promote collaboration and cooperation across the many disciplines that are required to understand, develop, evaluate and implement preventive strategies to address the major health problems of the people of North Carolina and the Southeast. These activities stretch from basic research to the evaluation of demonstration projects, the implementation of proven strategies and the education of health professionals.

The Center is supervised by a Policy Board composed of the five Deans and Associate Vice Chancellor for Health Affairs. The activities of the Center are developed and implemented by an Operational Committee consisting of representatives from each of the schools, the Vice Chancellor's office, the Sheps Center for Health Services Research and the State Health Department. The Center is currently one of seven prevention centers federally funded through a grant from the Centers for Disease Control and Prevention. Faculty from all of the schools working through the Center have developed and are carrying out numerous specific projects funded by federal, state and foundation grants and contracts.

Injury Prevention Research Center

Director – Carol Runyan, Ph.D.

The University of North Carolina Injury Prevention Research Center (IPRC) was established in 1987 as one of five centers of excellence funded by the Centers for Disease Control. The mission of the Center is to stimulate and participate in interdisciplinary research and to facilitate the translation of research into injury-control policies and programs for prevention, acute care and rehabilitation with particular emphasis on issues of regional importance.

Through its interdisciplinary teams of faculty from more than a dozen units throughout the UNC campus, the IPRC has developed a program of research addressing unintentional and intentional injuries in all settings and population groups.

IPRC research focuses on injuries among rural and other high-risk populations, including children, adolescents, the elderly, the poor and ethnic minorities. Core activities give strong emphasis to making improvements in data systems; providing training for graduate and postgraduate students and for practicing professionals; maintaining strong liaison with the state health agencies throughout the Southeast; developing resource materials for local practitioners, policy makers and the press; and developing linkages with other scholars nationally and internationally.

Institute for Environmental Studies

Director – Frederic K. Pfaender, Ph.D.

The Institute for Environmental Studies is administratively located within the Department of Environmental Sciences and Engineering of the School of Public Health, but has a campus-wide mission as a focal point for interdisciplinary work in environmental studies. The general purposes of the Institute are to foster and coordinate interdisciplinary research, teaching and service in environmental concerns among the various units of the University of North Carolina at Chapel Hill. In addition, the Institute assists in cooperative efforts on environmental matters between the Chapel Hill campus and other campuses of the University of North Carolina, with other colleges and universities and with governmental and private organizations. Specific activities include providing an administrative home for the UNC Center for Environmental Modeling, UNC DOE Global Change Fellowship Program, and the Industrial Ecology Program. The Institute also sponsors seminars, workshops and colloquia for University researchers, industries and the public.

UNC-CH News Services/ Dan Sears

International Health

Special Assistant to the Dean for International Activities – Leonard Dawson, M.P.H.

The Special Assistant chairs the School's International Health Committee, provides a focal point for international health activities and facilitates the development of international and cross-cultural research, consultation and training activities of the School of Public Health. Assistance is provided to the various units of the School in developing or adapting programs to the needs of foreign students, visiting scholars, short-term international visitors, students returning from international assignments and students with hopes of pursuing an international health career. Relationships with other international program units on campus, international assistance agencies and governments promote the exchange of expertise and the establishment of collaborative research and demonstration projects, particularly with less-developed countries.

Supporting activities include information about international health-related course offerings, a faculty directory of international health activity and sponsorship of forums and seminars.

Occupational Health Studies Program

Director – Carl M. Shy, M.D., Dr.Ph.

The Occupational Health Studies Program is an interdisciplinary research group involving the Departments of Biostatistics, Environmental Sciences and Engineering, and Epidemiology. It is administratively based in the Department of Epidemiology. The program conducts studies to identify work-related illnesses and causes of death, to identify environmental hazards and to develop recommendations for surveillance to permit early detection of health problems and hazards.

In the 1970s the OHSP conducted a major occupational health research program in the tire and rubber industry with support by the United Rubber, Cork, Linoleum and Plastic Workers of America International Union and the General, Goodyear, Firestone and Uniroyal Companies. Subsequently, a major research project was completed in the phosphate fertilizer industry with support from the Florida Phosphate Council. More recently, the OHSP began a study of cancer risks in the North Carolina Dusty Trades Industry. This study was conducted cooperatively with the National Institute of Occupational Safety and Health and the National Cancer Institute. The research of the OHSP provides excellent opportunities for specialized training programs for students with specific interest in occupational health.

Emphasis on Aging

Activities on aging in the School of Public Health are carried out by individual faculty primarily through their home departments. A selected faculty member works with the University's Center for Health Promotion and Disease Prevention in facilitating the Center's work in aging and its interface in this area with the School.

In addition to taking courses that deal with a variety of aspects of aging, students have the opportunity to participate in faculty research projects on the topic.

Faculty

James Ralph Abernathy (1965) Professor of Biostatistics — B.S., 1951 (Samford University); M.S.P.H., 1953 (The University of North Carolina); Ph.D., 1965 (The University of North Carolina at Chapel Hill)

Linda S. Adair (1988) Associate Professor of Nutrition — B.S., 1971 (State University of New York at Stony Brook); Ph.D., 1980 (University of Pennsylvania)

Barbara E. Ainsworth (1989) Assistant Professor of Nutrition; Assistant Professor of Physical Education, Exercise and Sport Science — B.A., 1974 (California State University); M.A., 1975, Ph.D., 1987, M.P.H., 1989 (University of Minnesota)

Michael Aitken (1987) Assistant Professor of Environmental Sciences and Engineering — B.S., 1978 (State University of New York); M.S., 1980 (University of California); Ph.D., 1988 (University of Notre Dame)

Phillip William Albro (1981) Adjunct Associate Professor of Environmental Sciences and Engineering — B.A., 1961 (University of Rochester); Ph.D., 1968 (St. Louis University)

Timothy E. Aldrich (1988) Adjunct Assistant Professor of Epidemiology — B.S., 1972, M.P.H., 1979 (University of Alabama at Birmingham); Ph.D., 1985 (University of Texas at Houston)

James Elmore Allen (1968) Associate Professor of Health Policy and Administration; Senior Research Associate, Carolina Population Center — B.A., 1957 (University of Arizona); S.T.B., 1960, Ph.D., 1964 (Boston University); M.S.P.H., 1969 (The University of North Carolina at Chapel Hill)

Naomar Almeida-Filho (1986) Adjunct Associate Professor of Epidemiology — M.D., 1976 (Famed-Ufba, Brazil); M.P.H., 1978 (University of Bahia, Brazil); Ph.D., 1981 (The University of North Carolina at Chapel Hill)

Ingrid A. Amara (1985) Adjunct Assistant Professor of Biostatistics — B.S., 1969 (Arizona State University at Tempe); M.S.P.H., 1975, Dr.P.H., 1983 (The University of North Carolina at Chapel Hill)

Deborah A. L. Amaral (1988) Assistant Professor of Environmental Sciences and Engineering — B.A., 1979 (Reed College); M.S., 1981, Ph.D., 1983 (Carnegie-Mellon University)

Alice S. Ammerman (1990) Assistant Professor of Nutrition — B.A., 1976 (Duke University); M.P.H., 1981, Dr.P.H., 1990 (The University of North Carolina at Chapel Hill)

John J. B. Anderson (1971) Professor of Nutrition; Adjunct Professor of Physical Education, Exercise and Sport Science — B.A., 1956 (Williams College); M.A.T., 1958 (Harvard University); M.A., 1962 (Boston University); Ph.D., 1966 (Cornell University)

Elizabeth B. Andrews (1991) Adjunct Assistant Professor of Epidemiology — B.A., 1975, M.P.H., 1977, Ph.D., 1990 (The University of North Carolina at Chapel Hill)

Richard N. L. Andrews (1981) Professor of Environmental Sciences and Engineering; Professor of Health Policy and Administration; Professor of City and Regional Planning — A.B., 1966, M.R.P., 1970 (Yale University); Ph.D., 1972 (The University of North Carolina at Chapel Hill)

April Hoyle

Dragana A. Andjelkovich (1993) Adjunct Associate Professor of Epidemiology — M.D., 1958 (University of Belgrade, Yugoslavia); M.P.H., 1963, Dr.P.H., 1969 (Johns Hopkins University)

Marcia A. Angle (1985) Adjunct Assistant Professor of Health Policy and Administration; Clinical Assistant Professor, Medical School Administration — B.A., 1976 (Radcliffe College); M.D., 1981 (Duke University); M.P.H., 1987 (The University of North Carolina at Chapel Hill)

Marilyn Kay Asay (1980) Adjunct Instructor of Public Health Nursing — Diploma, 1964 (Nebraska Methodist Hospital School of Nursing); B.S., 1964 (Nebraska Wesleyan University); M.S., 1980 (The University of North Carolina at Chapel Hill)

Elaine M. Asper (1992) Instructor of Health Policy and Administration — B.A., 1968 (University of Minnesota); M.B.A., 1977 (New York University)

Delton Atkinson (1989) Adjunct Instructor of Biostatistics — B.A., 1974, M.P.H., 1976, M.P.H., 1979 (The University of North Carolina at Chapel Hill)

Jan R. Atwood (1991) Professor of Public Health Nursing; Professor of Health Behavior and Health Education — B.S.N., 1964, M.P.H., 1967 (University of Michigan); M.A., 1974, Ph.D., 1976 (University of Arizona)

Thomas J. Bacon (1976) Adjunct Associate Professor of Health Policy and Administration; Adjunct Assistant Dean of Medicine, Mountain AHEC — M.A., 1971 (University of Chicago); Dr.P.H., 1977 (The University of North Carolina at Chapel Hill)

James D. Bader (1986) Adjunct Associate Professor of Health Policy and Administration; Research Associate Professor of Operative Dentistry — B.S., 1966, D.D.S., 1970, M.P.H., 1973 (University of Michigan)

Donna D. Baird (1986) Adjunct Assistant Professor of Epidemiology — B.A., 1968 (Macalester College); Ph.D., 1980 (University of Minnesota); M.P.H., 1984 (The University of North Carolina at Chapel Hill)

Louise M. Ball (1984) Associate Professor of Environmental Sciences and Engineering (Effective December 1, 1993) — B.Sc., 1972 (University of Bristol, England); Ph.D., 1976 (St. Mary's Hospital Medical School, University of London)

Shrikant Ishver Bangdiwala (1980) Research Associate Professor of Biostatistics — B.S., 1975, M.S, 1978, Ph.D., 1980 (The University of North Carolina at Chapel Hill)

John C. Barefoot (1991) Adjunct Associate Professor of Epidemiology — A.B., 1963 (University of North Carolina); M.A., 1965 (Bryn Mawr College); Ph.D., 1968 (The University of North Carolina at Chapel Hill)

Ralph S. Baric (1986) Associate Professor of Epidemiology — B.S., 1977, Ph.D., 1982 (North Carolina State University)

Howard Barnhill (1973) Clinical Professor of Health Behavior and Health Education Emeritus (1983) — B.S., 1938 (A&T State University); M.S.P.H., 1958 (North Carolina Central University)

Harriet Hylton Barr (1965) Clinical Associate Professor of Health Behavior and Health Education; Assistant Dean of Alumni Affairs, External Affairs and Community Health Service — A.B., 1945 (Duke University); M.P.H., 1948 (The University of North Carolina)

Carolyn J. Barrett (1977) Clinical Assistant Professor of Nutrition — B.S., 1970 (Pennsylvania State University); M.S., 1972 (University of Kansas); M.P.H., 1977 (Tulane University)

James C. Barrett (1992) Adjunct Professor of Epidemiology — B.S., 1969 (College of William and Mary); Ph.D., 1974 (Johns Hopkins University)

Karl E. Bauman (1966) Professor of Health Behavior and Health Education — A.B., 1961, M.A., 1963 (University of Nebraska); Ph.D., 1965 (Florida State University)

Barbara T. Baylor (1992) Adjunct Instructor of Health Behavior and Health Education — B.A., 1971 (Shaw University); M.P.H., 1986 (The University of North Carolina at Chapel Hill)

James D. Beck (1989) Adjunct Professor of Epidemiology; Professor of Dental Ecology — A.B., 1964, M.S., 1967, Ph.D., 1969, (The University of North Carolina at Chapel Hill)

Mary A. Beck (1990) Adjunct Instructor of Health Policy and Administration — B.A., 1969 (Ohio State University); M.P.H., 1971 (University of Michigan)

Mary Caroline Becker (1965) Associate Professor of Epidemiology Emeritus (1990) — A.B., 1946 (Vanderbilt University); M.D., 1950 (Johns Hopkins University)

Deborah E. Bender (1986) Research Associate Professor of Health Policy and Administration — B.A., 1969 (Newton College); Ph.D., 1980 (American University); M.P.H., 1981 (The University of North Carolina at Chapel Hill)

Trude A. Bennett (1992) Assistant Professor of Maternal and Child Health — A.B., 1967 (Columbia University); M.S.W., 1976 (Simmons College); M.P.H., 1984, Dr. P.H., 1988 (The University of North Carolina at Chapel Hill)

Michael A. Berry (1986) Adjunct Associate Professor of Environmental Sciences and Engineering; Adjunct Associate Professor of Business — B.S., 1965, M.S., 1969 (Gonzaga University); M.S., 1974 (Duke University); Ph.D., 1984 (The University of North Carolina at Chapel Hill)

Patricia K. Bertsche (1991) Adjunct Instructor of Public Health Nursing — B.S., 1976 (Marquette University); M.P.H., 1988 (Uniformed Services University of Health Sciences)

Richard A. Berzon (1992) Adjunct Assistant Professor of Epidemiology — B.A., 1976 (Sarah Lawrence College); M.A., 1984 (Duke University); Dr.P.H., 1990 (Johns Hopkins University)

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Helen T. Bhattacharyya (1988) Adjunct Associate Professor of Biostatistics — B.A., 1960 (Swarthmore College); M.S., 1962 (North Carolina State University); Ph.D., 1973 (The University of North Carolina at Chapel Hill)

Pouru P. Bhiwandiwala (1980) Adjunct Associate Professor of Maternal and Child Health — B.S., 1968 (Bombay University, India); M.D., 1973 (Bombay University); M.S.P.H., 1977 (The University of North Carolina at Chapel Hill)

Andrea K. Biddle (1991) Assistant Professor of Health Policy and Administration — B.S., 1984 (University of California at Los Angeles); M.P.H., 1986 (University of Texas Health Science Center); Ph.D., 1990 (Rand Graduate School of Policy Studies)

Richard E. Bilsborrow (1972) Research Professor of Biostatistics — B.A., 1963 (Carleton College); M.A., 1966, Ph.D., 1968 (University of Michigan)

Linda S. Birnbaum (1980) Adjunct Professor of Environmental Sciences and Engineering — B.A., 1967 (University of Rochester); M.S., 1969, Ph.D., 1972 (University of Illinois)

Susan Blalock (1987) Adjunct Assistant Professor of Health Behavior and Health Education — B.S., 1976, M.P.H., 1980 (University of Michigan); Ph.D., 1987 (The University of North Carolina at Chapel Hill)

Lynn W. Blanchard (1991) Adjunct Assistant Professor of Health Behavior and Health Education; Research Assistant Professor of Pediatrics — B.S., 1970 (East Carolina University); M.P.H., 1985, Ph.D., 1989 (The University of North Carolina at Chapel Hill)

Dan G. Blazer (1986) Adjunct Professor of Epidemiology — B.A., 1965 (Vanderbilt University); M.D., 1969 (University of Tennessee); M.P.H., 1979, Ph.D., 1980 (The University of North Carolina at Chapel Hill)

Ralph H. Boatman, Jr. (1960) Professor of Health Behavior and Health Education Emeritus (1991) — B.S.Ed., 1943 (Southern Illinois University); M.P.H., 1947, Ph.D., 1954 (The University of North Carolina)

Mary Bobbitt-Cooke (1988) Adjunct Instructor of Health Behavior and Health Education — B.A., 1966 (Washington University at St. Louis); M.P.H., 1986 (The University of North Carolina at Chapel Hill)

Brian A. Boehlecke (1982) Clinical Associate Professor of Epidemiology; Associate Professor of Medicine — B.S., 1966 (Cornell University); M.D., 1970 (State University of New York at Buffalo); M.S.P.H., 1981 (The University of North Carolina at Chapel Hill)

Kenneth A. Bollen (1985) Adjunct Professor of Health Policy and Administration; Professor of Sociology — B.A., 1973 (Drew University); M.A., 1975, Ph.D., 1977 (Brown University)

James Michael Bowling (1991) Adjunct Instructor of Health Behavior and Health Education — B.A., 1976, M.A., 1982 (The University of North Carolina at Chapel Hill)

Kerrie E. Boyle (1989) Adjunct Assistant Professor of Biostatistics — B.S., 1974 (Fairfield University); M.S., 1976 (Georgetown University); Dr.P.H. 1986 (The University of North Carolina at Chapel Hill)

Jeffery Allen Boyd (1992) Adjunct Assistant Professor of Epidemiology — B.S., 1980 (Duke University); M.S., 1982, Ph.D., 1986 (North Carolina State University)

Philip S. Brachman (1993) Adjunct Professor of Health Policy and Administration — B.S., 1949, M.D., 1953 (University of Wisconsin)

Janet Braunstein (1991) Adjunct Instructor of Public Health Nursing — B.S.N., 1975 (Cornell University); P.N.P., 1979 (University of Virginia); M.P.H., 1983 (University of Minnesota)

Lou K. Brewer (1987) Lecturer in Public Health Nursing — B.S., 1971, M.P.H., 1977 (The University of North Carolina at Chapel Hill)

John Briscoe (1981) Adjunct Associate Professor of Environmental Engineering — B.S., 1969 (University of Capetown, South Africa); M.S., 1972, Ph.D., 1976 (Harvard University)

W. Eugene Broadhead (1987) Adjunct Assistant Professor of Epidemiology — B.S., 1977 (Davidson College); M.P.H., 1980 (The University of North Carolina at Chapel Hill); M.D., 1981 (Duke University); Ph.D., 1987 (The University of North Carolina at Chapel Hill)

Edward F. Brooks (1972) Associate Vice Chancellor for Health Affairs; Adjunct Assistant Professor of Health Policy and Administration — B.A., 1965 (Bates College); M.B.A., 1967 (Cornell University); Dr.P.H., 1985 (The University of North Carolina at Chapel Hill)

Dolores S. Brookshire (1987) Adjunct Instructor of Public Health Nursing — B.S.N., 1983 (The University of North Carolina at Greensboro); M.S., 1987 (The University of North Carolina at Chapel Hill)

J. Trig Brown (1988) Adjunct Assistant Professor of Epidemiology — M.D., 1977 (Washington University); M.P.H., 1987 (The University of North Carolina at Chapel Hill)

Dorothy C. Browne (1981) Associate Professor of Maternal and Child Health — B.A., 1969 (Bennett College); M.S.W., 1972 (University of Pittsburgh); M.P.H., 1974, Dr.P.H., 1980 (Harvard University)

Rebecca Broach Bryan (1959) Associate Professor of Nutrition Emeritus (1977) — B.S., 1934, M.S., 1944 (University of Georgia); M.P .H., 1952 (The University of North Carolina)

Paul Allen Buescher (1991) Adjunct Assistant Professor of Maternal and Child Health — B.A., 1971 (Louisiana State University); M.A., 1973, Ph.D., 1977 (The University of North Carolina at Chapel Hill)

Marjorie G. Busby (1990) Adjunct Assistant Professor of Nutrition — B.A., 1978 (The University of North Carolina at Charlotte); M.P.H., 1981 (The University of North Carolina at Chapel Hill)

Jianwen Cai (1992) Assistant Professor of Biostatistics — B.S., 1985 (Shandong University, People's Republic of China); M.S, 1989, Ph.D., 1992 (University of Washington at Seattle)

Marcia K. Campbell (1991) Research Assistant Professor of Nutrition; Clinical Scientist, Center for Development and Learning — B.S., 1974 (Duke University); M.P.H., 1977 (The University of North Carolina at Chapel Hill)

Moses Carey, Jr. (1981) Adjunct Assistant Professor of Health Policy and Administration — M.S.P.H., 1972, J.D., 1980 (The University of North Carolina at Chapel Hill)

Timothy S. Carey (1993) Clinical Associate Professor of Epidemiology; Associate Professor of Medicine — B.A., 1972 (Colby College); M.D., 1976 (University of Vermont); M.P.H., 1985 (The University of North Carolina at Chapel Hill)

Daniel E. Carroll (1989) Adjunct Professor of Nutrition — B.S., 1967 (University of Massachusetts); Ph.D., 1967 (Virginia Polytechnic Institute and State University)

Elmer F. Chaffee (1966) Associate Professor of Parasitology and Laboratory Practice Emeritus (1976) — B.S., 1938 (Idaho); M.S.P.H., 1947 (The University of North Carolina); Ph.D., 1952 (Duke University)

Lloyd E. Chambless (1981) Research Associate Professor of Biostatistics — A.B., 1964 (University of Florida at Gainesville); M.A. 1969 (University of Illinois at Urbana); Ph.D., 1979 (The University of North Carolina at Chapel Hill)

Edward L. Chaney (1979) Professor of Radiological Hygiene in Environmental Sciences and Engineering; Professor of Radiation Oncology, School of Medicine — B.S., 1965 (Millsaps College); Ph.D., 1969 (University of Tennessee)

Stephen G. Chaney (1972) Professor of Nutrition; Associate Professor of Biochemistry — B.S., 1966 (Duke University); Ph.D., 1970 (University of California at Los Angeles)

Emil Theodore Chanlett (1946) Professor of Sanitary Engineering Emeritus (1981) — B.S., 1937 (City College of New York); M.S.P.H., 1939 (Columbia University); M.S.S.E., 1941 (The University of North Carolina)

M. Judith Charles (1987) Research Assistant Professor of Environmental Sciences and Engineering — B.S., 1974 (University of Vermont); M.S., 1979 (University of Florida); Ph.D., 1984 (University of Michigan)

Barbara O. Chavious (1986) Clinical Instructor of Health Policy and Administration; Executive Master's Program Assistant Director — B.A., 1968 (Miami University of Ohio); M.P.H., 1985 (The University of North Carolina at Chapel Hill)

Thomas J. Chegash (1980) Adjunct Assistant Professor of Nutrition — B.S., 1971 (Cornell University); M.B.S., 1977 (George Washington University)

Sidney Shaw Chipman (1950) Professor of Maternal and Child Health Emeritus (1970) — B.A., 1924 (Acadia University); M.D., 1928 (McGill University); M.P.H., 1947 (Yale University); D.Sc., 1971 (Acadia University)

George Christakos (1990) Assistant Professor of Environmental Sciences and Engineering — B.S., 1979, Ph.D., 1986 (National Technical University of Athens, Greece); M.Sc., 1980 (University of Birmingham, England); M.S., 1982 (Massachusetts Institute of Technology); Ph.D., 1990 (Harvard University)

Russell Fabrique Christman (1973) Professor of Environmental Sciences and Engineering — B.S., 1958, M.S., 1960, Ph.D., 1962 (University of Florida)

John A. Cidlowski (1982) Professor of Nutrition; Professor of Physiology — B.A., 1971 (University of South Florida); Ph.D., 1975 (Medical College of Georgia)

Larry D. Claxton (1982) Adjunct Associate Professor of Environmental Sciences and Engineering — B.S., 1967 (Middle Tennesse State University); M.S., 1971 (Memphis State University); Ph.D., 1980 (North Carolina State University)

Maria C. Clay (1989) Adjunct Instructor of Health Policy and Administration — B.S., 1972, M.Ed., 1976 (East Carolina University)

Dennis A. Clements III (1991) Adjunct Assistant Professor of Epidemiology — B.A., 1968 (Johns Hopkins University); M.D., 1973 (University of Rochester); Ph.D., 1990 (The University of North Carolina at Chapel Hill)

Nora Francis Cline (1961) Associate Professor of Public Health Nursing Emeritus (1970) — R.N., 1945, B.S., 1945 (Duquesne University); M.L., 1947 (University of Pittsburgh)

Thomas B. Cole (1988) Adjunct Assistant Professor of Epidemiology — B.A., 1977 (University of Texas at Austin), M.D., 1981 (Baylor College of Medicine); M.P.H., 1988 (The University of North Carolina at Chapel Hill)

Rosalind A. Coleman (1991) Professor of Nutrition; Professor of Pediatrics, School of Medicine — B.A., 1964 (Radcliffe College); M.D., 1969 (Case Western Reserve University)

Gwen W. Collman (1986) Adjunct Assistant Professor of Epidemiology — B.S., 1977 (State University of New York); M.P.H., 1979 (University of Michigan); Ph.D., 1984 (The University of North Carolina at Chapel Hill)

Mary M. Cooper (1992) Adjunct Instructor of Health Behavior and Health Education — B.S., 1978 (The University of North Carolina at Greensboro); M.P.H., 1988 (The University of North Carolina at Chapel Hill)

Kathleen Conway (1993) Research Assistant Professor of Epidemiology — B.S., 1978 (University of Notre Dame); Ph.D., 1989 (New York University)

Joan Cornoni-Huntley (1966) Adjunct Professor of Epidemiology — B.A., 1953 (Mary Washington College); M.P.H., 1962, Ph.D., 1970 (The University of North Carolina at Chapel Hill)

Elizabeth Jackson Coulter (1965) Professor of Biostatistics Emeritus (1986) — A.B., 1941 (Swarthmore College); A.M. 1946, Ph.D., 1948 (Radcliffe College)

Carol G. Cox (1991) Adjunct Assistant Professor of Public Health Nursing — B.S.N., 1972 (University of Massachusetts); M.P.H., 1975, M.S., 1989 (The University of North Carolina at Chapel Hill)

Douglas J. Crawford-Brown (1982) Associate Professor of Environmental Sciences and Engineering — B.S., 1975, M.S., 1977, Ph.D., 1980 (Georgia Institute of Technology)

John P. Creason (1978) Adjunct Associate Professor of Biostatistics — B.S., 1964, M.S., 1967 (University of Missouri); Ph.D., 1978 (The University of North Carolina at Chapel Hill)

John R. Crouse (1985) Adjunct Associate Professor of Epidemiology — B.A., 1961 (University of Michigan); M.D., 1969 (State University of New York)

Frank V. Crout (1985) Adjunct Assistant Professor of Epidemiology — B.S., 1974 (University of Central Florida); M.S., 1977, M.B.A., 1981, Ph.D., 1981 (University of Kentucky)

Clarence Edward Davis (1972) Professor of Biostatistics — B.A., 1963 (Howard Payne College); M.S., 1965 (Tulane University); Ph.D., 1970 (North Carolina State University)

Deborah V. Dawson (1985) Adjunct Assistant Professor of Biostatistics; Adjunct Assistant Professor of Epidemiology — B.A., 1974 (Montclair State College); Sc.M., 1976 (Johns Hopkins University); Ph.D., 1981 (The University of North Carolina at Chapel Hill)

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Gordon H. DeFriese (1971) Clinical Professor of Epidemiology; Adjunct Professor of Health Policy and Administration; Professor of Social Adminstrative Medicine; Director, Cecil G. Sheps Health Services Research Center — B.S., 1963 (Middle Tennessee State University); M.A., 1966, Ph.D., 1967 (University of Kentucky)

David Mahlon DeLong (1979) Adjunct Associate Professor of Biostatistics — B.A., 1969 (University of Maine at Orono); M.S., 1975, Ph.D., 1979 (The University of North Carolina at Chapel Hill)

Elizabeth Ray DeLong (1979) Adjunct Assistant Professor of Biostatistics — B.A. 1969, M.A., 1970 (University of Maine at Orono); Ph.D., 1979 (The University of North Carolina at Chapel Hill)

David M. DeMarini (1991) Adjunct Associate Professor of Environmental Sciences and Engineering — B.S., 1972, M.S., 1974, Ph.D., 1980 (Illinois State University at Normal)

John M. Dement (1981) Adjunct Associate Professor of Air and Industrial Hygiene in Environmental Sciences and Engineering— B.S., 1971 (North Carolina State University); M.S., 1972 (Harvard University); Ph.D., 1980 (The University of North Carolina at Chapel Hill)

Barbara H. Dennis (1990) Research Associate Professor of Nutrition — B.S., 1955 (University of Utah); M.S., 1959 (University of Wisconsin); Ph.D., 1985 (Virginia Polytechnical Institute and State University)

Susan I. DesHarnais (1988) Associate Professor of Health Policy and Administration — B.A., 1967, M.P.H., 1969, Ph.D., 1983 (University of Michigan at Ann Arbor)

Brenda McEvoy DeVellis (1978) Associate Professor of Health Behavior and Health Education — B.A., 1969 (University of Massachusetts); M.A., 1973 (Connecticut College); Ph.D., 1978 (George Peabody College)

Robert DeVellis (1981) Research Associate Professor of Health Behavior and Health Education; Assistant Director of Rehabilitation Program, School of Medicine; Research Assistant Professor of Psychology — B.S., 1970 (University of Massachusetts); M.A., 1973 (Connecticut College); Ph.D., 1977 (George Peabody College)

Denise M. Dickinson (1992) Adjunct Instructor of Health Behavior and Health Education — B.A., 1986 (University of California at Berkeley); M.P.H., 1991 (The University of North Carolina at Chapel Hill)

Francis A. DiGiano (1981) Professor of Water Resources and Engineering in Environmental Sciences and Engineering — B.S.C.E., 1964 (University of Massachusetts); M.S.C.E., 1965 (Tufts University); Ph.D., 1969 (University of Michigan)

Arlene J. Diosegy (1989) Adjunct Instructor of Health Policy and Administration — B.A., 1971 (Allegheny College); J.D., 1974 (Temple University)

James P. Dixon (1976) Clinical Professor of Health Policy and Administration — B.S., 1939 (Antioch College); M.D., 1943 (Harvard University); M.S., 1947 (Columbia University)

Janice M. Dodds (1989) Associate Professor of Nutrition; Associate Professor of Maternal and Child Health — B.S., 1963 (Iowa State University); M.Ed., 1965 (Tufts University); Ed.D., 1978 (Columbia University)

William W. Dow (1984) Adjunct Assistant Professor of Health Behavior and Health Education — B.S., 1967, M.D., 1974 (Vanderbilt University)

Michael F. Durfee (1977) Lecturer in Maternal and Child Health; Associate Professor of Pediatrics, School of Medicine — B.A., 1959 (University of Ohio); M.D., 1963 (University of Virginia); M.P.H., 1977 (The University of North Carolina at Chapel Hill)

JoAnne L. Earp (1975) Professor of Health Behavior and Health Education — B.A., 1965 (Bryn Mawr College); Sc.D., 1974 (Johns Hopkins University)

Elizabeth Merrill Edmands (1967) Associate Professor of Public Health Nursing, Emeritus (1979) — R.N., 1936 (Rhode Island Hospital) ; B.S.P.H.N., 1943 (University of Michigan); M.A., 1955 (Columbia University)

Joseph Chike Edozien (1971) Professor of Nutrition Emeritus (1990) — B.Sc., 1948, M.Sc., 1950, M.B., B.Ch., 1951, M.D., 1954 (National University of Ireland); M.R.C.P., 1954, F.R.C.P., 1963 (University of Edinburgh, Scotland); D.Sc., 1963 (University of Rio de Janerio, Brazil)

Lloyd J. Edwards (1991) Assistant Professor of Biostatistics — B.A., 1980 (Morehouse College); M.A., 1982 (University of Maryland); Ph.D., 1990 (The University of North Carolina at Chapel Hill)

Merril Eisenbud (1984) Adjunct Professor of Environmental Sciences and Engineering — B.S.Ed., 1936 (New York University); Sc.D., 1960 (Fairleigh Dickinson University); D.H.C., 1971 (Catholic University of Rio de Janeiro, Brazil)

Regina Cecylia Elandt-Johnson (1964) Professor of Biostatistics Emeritus (1985) — M.S., 1946 (University of Poznan, Poland); Ph.D., 1955 (Poznan Agricultural University, Poland)

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Susan T. Ennett (1992) Adjunct Assistant Professor of Health Behavior and Health Education — B.A., 1976 (Mount Holyoke College); M.S.P.H., 1987, Ph.D., 1991 (The University of North Carolina at Chapel Hill)

David S. Ensor (1989) Adjunct Professor of Environmental Sciences and Engineering — B.A., 1963 (Washington State University); M.S., 1968, Ph.D., 1972 (University of Washington at Seattle)

Richard B. Everson (1988) Adjunct Professor of Epidemiology — B.S., 1968 (Trinity College); M.D., 1972 (University of Rochester); M.P.H., 1985 (The University of North Carolina at Chapel Hill)

Anita Manders Farel (1973) Clinical Assistant Professor of Maternal and Child Health — A.B., 1966 (University of California); M.S.W., 1968 (University of California at Los Angeles); Dr.P.H., 1979 (The University of North Carolina at Chapel Hill)

MaryAnn C. Farthing (1978) Clinical Associate Professor of Nutrition Emeritus (1990) — B.S., 1954 (North Carolina College for Women at Greensboro); M.S., 1957 (University of Tennessee); Ph.D., 1974 (The University of North Carolina at Greensboro)

John R. Feussner (1989) Adjunct Associate Professor of Health Policy and Administration — BA., 1968 (University of Pennsylvania); M.D., 1973 (University of Vermont); Ph.D., 1983 (The University of North Carolina at Chapel Hill)

Laurel A. Files (1968) Associate Professor and Associate Chair of Health Policy and Administration — B.A., 1960 (Hofstra College); M.A., 1963 (Yale University); Ph.D., 1978 (The University of North Carolina at Chapel Hill)

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William Shoemaker Flash (1964) Associate Professor of Health Policy and Administration Emeritus (1985); Clinical Associate Professor of Psychiatry Emeritus — A.B., 1948, M.P.A., 1950, Ph.D., 1954 (Harvard University)

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University of North Carolina

Sixteen Constituent Institutions

History of the University

The University of North Carolina is composed of all the public institutions of higher education in North Carolina that confer degrees at the baccalaureate level or higher. The University was authorized by the State Constitution in 1776, and it was chartered in 1789 by the General Assembly.

The University of North Carolina opened its doors to students at Chapel Hill in 1795. Thereafter, beginning in the latter part of the nineteenth century, the General Assembly of North Carolina has established and supported fifteen other public senior institutions in keeping with Article IX, Section 8, of the Constitution of North Carolina which provides that the "General Assembly shall maintain a public system of higher education, comprising The University of North Carolina and such other institutions of higher education as the General Assembly may deem wise."

By 1969 The University of North Carolina included six constituent institutions, governed by a single Board of Trustees. This multicampus University had its beginnings in legislation enacted in 1931 that defined The University of North Carolina to include The University of North Carolina at Chapel Hill, North Carolina State University at Raleigh, The University of North Carolina at Asheville, and The University of North Carolina at Wilmington.

Beginning in 1877, the General Assembly of North Carolina established or acquired ten additional separately governed state-supported senior institutions of higher education. They are: Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, North Carolina School of the Arts, Pembroke State University, Western Carolina University and Winston-Salem State University. Then, in 1971, the General Assembly redefined The University of North Carolina, and under the terms of that legislation all sixteen public senior institutions became constituent institutions of The University of North Carolina.

The constitutionally authorized Board of Trustees of the 16-campus University of North Carolina was designated the Board of Governors and this body is by law The University of North Carolina. The Board of Governors consists of 32 members elected by the General Assembly, and it is charged with "the general determination, control, supervision, management, and governance of all affairs of the constituent institutions." The chief executive officer of the University is the President.

Each constituent institution of the University has its own faculty and student body. The chief administrative officer of each institution is the chancellor, and the chancellors are responsible to the President.

Each constituent institution also has a board of trustees composed of thirteen members: eight elected by the Board of Governors, four appointed by the Governor, and the elected president of the student body ex officio. (The School of the Arts has two additional ex officio trustees.) The principal powers of these institutional boards are exercised under a delegation of authority from the Board of Governors.

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Appendix

Resident Status for Tuition Purposes[1]

The following sections summarize important aspects of the residency law. A complete explanation of the Statute and the procedures under the Statute is contained in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes*. This Manual and other information concerning the application of this law are available for inspection in the Admissions Offices of the University. Copies of the Manual are also on reserve at the Robert B. House Undergraduate Library and in the Reserve Reading Room of the Health Sciences Library. All students are responsible for knowledge of the contents of the Statute and the Manual.

Every applicant for admission is required to make a statement as to his or her length of residence in North Carolina. A person who qualifies as a resident for tuition purposes under North Carolina law pays a lower rate of tuition than a nonresident. To qualify for in-state tuition, a legal resident must have been domiciled in North Carolina for at least twelve months immediately prior to the beginning of the term for which classification as a resident for tuition purposes is sought. The student must also establish that his or her presence in the State during such twelve-month period was for purposes of maintaining a bona fide domicile rather than for purposes of maintaining a mere temporary residence incident to enrollment in an institution of higher education. "Domicile" means one's permanent home of indefinite duration, as distinguished from a temporary place of abode; it is synonymous with "legal residence" and is established by being physically present in a place with the concurrent intent to make that place a domicile. To determine an individual's intent, the University evaluates his or her objectively verifiable conduct as an indicator of his or her state of mind.

Procedural Information

General. A student admitted to initial enrollment in an institution (or permitted to re-enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) is classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual matriculation. In the absence of a current and final determination of the student's residence prior to matriculation, the student is classified a nonresident for tuition purposes. The institution will thereafter reach a final determination of the student's residence status. Unless a person supplies enough information to allow the admissions officer to classify him or her as a resident for tuition purposes, the person will be classified a nonresident for tuition purposes. A residence classification once assigned (and confirmed pursuant to any appellate process invoked) may be changed thereafter (with a corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic calendar.

Transfer Students. When a student transfers from one North Carolina public institution of higher education to another, he or she is required to be treated as a new student by the institution to which he or she is transferring and must be assigned an initial residence classification for tuition purposes. The residence classification of a student by one institution is not binding on another institution. The North Carolina institutions of higher education will assist each other by supplying residency information and classification records concerning a student to another classifying institution upon request.

The transfer into or admission to a different component of the same institution (e.g., from an undergraduate to a graduate or professional program) is not construed as a transfer from one institution to another and thus does not by itself require a reclassification inquiry unless (1) the affected student requests a reclassification inquiry or (2) the transfer or enrollment occurs following the lapse of more than one quarter, semester, or term during which the individual was not enrolled as a student.

Responsibility of Students and Prospective Students. Any student or prospective student in doubt concerning his or her residence status bears the responsibility for securing a ruling by completing an application for resident status and filing it with the admissions officer. The student who, due to subsequent events, becomes eligible for a change in classification whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the Office of Admissions of these circumstances in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

Application Process. A person may obtain an application for resident status from his or her admissions office. Applicants for admission who claim eligibility for the in-state tuition rate customarily complete a two-page residency application as a part of the admissions application packet. Some applicants for admission will thereafter be required to complete a further, four-page residency application. Enrolled students seeking a change from nonresident to resident status are required to complete a four-page residency application. All applications for resident status must be filed with the proper admissions office before the end of the term for which resident status for tuition purposes is sought. The last day of the final examination period is considered the last day of the term.

After filing a resident status application, a person may receive a letter from his or her admissions office requesting more information in connection with that application. When a student receives such a request before the end of the term for which classification is sought he or she must respond to that request no later than three weeks after the end of the term. If the student receives the request for supplemental information after the end of the term in question, he or she must supply the requested information within three weeks after receipt of the request. Failure to supply the requested information within the specified time limit will result in a continuation of the student's nonresident classification unless good cause is shown for such failure.

The admissions office may require an applicant for admission to file a residency application or respond to a request for more information more quickly when residence status is a factor in the admissions decision.

The pamphlet "Information About Resident Status for Tuition Purposes" contains more details about the residency application process and is available at all admissions offices.

Fraudulent Applications. If a student is classified a resident for tuition purposes after submitting falsified residentiary information or after knowingly withholding residentiary information, the student's application for in-state tuition status is fraudulent. The institution may re-examine any application suspected of being fraudulent and, if warranted, will change the student's residence status retroactively to the beginning of the term with respect to which the student originally made the fraudulent application. If this occurs the student must pay the out-of-state tuition differential for all the enrolled terms intervening between the fraudulent application and its discovery. Further, knowing falsification of responses on a resident status application may subject the applicant to disciplinary consequences, including dismissal from the institution.

Burden of Proof and Statutory Prima Facie Evidence. A person has the burden of establishing facts which justify his or her classification as a resident for tuition purposes. The balancing of all the evidence must produce a preponderance of evidence supporting the assertion of in-state residence. Under the Statute, proof of resident status is controlled initially by one of two evidentiary beginning points which are stated in terms of prima

[1] The information in this section comes from three sources: (i) North Carolina General Statutes, §116–143.1, (ii) *A Manual to Assist the Public Higher Eduction Institutions of North Carolina in The Matter of Student Residence Classification for Tuition Purposes*, Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes.

facie evidence.

a. Even if the person is an adult, if his or her parents (or court-appointed guardian in the case of some minors) are not legal residents of North Carolina, this is prima facie evidence that the person is not a legal resident of North Carolina unless he or she has lived in this state the five consecutive years prior to enrolling or re-registering. To overcome this prima facie showing of nonresidence, a person must produce evidence that he or she is a North Carolina domiciliary despite the parents' nonresident status.

b. Conversely, if the person's parents are domiciliaries of North Carolina under the Statute, this fact constitutes prima facie evidence that the person is a domiciliary of North Carolina. This prima facie showing may also be overcome by other evidence to the contrary. If a person has neither living parents nor legal guardian, the prescribed prima facie evidence rule cannot and does not apply.

Erroneous Notices Concerning Classification. If a student, who has been found to be a nonresident for tuition purposes, receives an erroneous written notice from an institutional officer identifying the student as a resident for tuition purposes, the student is not responsible for paying the out-of-state tuition differential for any enrolled term beginning before the classifying institution notifies the student that the prior notice was erroneous.

Grace Period. If a student has been properly classified as a North Carolina resident for uition purposes and, thereafter, his or her state of legal residence changes while he or she s enrolled in a North Carolina public institution of higher education, the statute provides or a grace period during which the student is allowed to pay tuition at the in-state rate lespite the fact that the student is no longer a North Carolina legal resident. This grace period extends for a minimum of twelve months from the date of change in legal residence, nd if the twelve-month period ends during a semester or academic term in which the tudent is enrolled, the grace period extends also to the end of that semester or academic erm.

Reacquisition of Resident Tuition Status. The prescribed twelve-month period of legal esidence may be shortened if the person seeking to be classified as a resident for tuition urposes was formerly classified a North Carolina resident for tuition purposes, bandoned North Carolina domicile, and reestablished North Carolina domicile within welve months after abandoning it. Interested persons should consult their admissions ffices for a detailed explanation of the conditions which must be met to qualify under this ection.

Appeals. A student appeal of a classification decision made by any admissions officer ust be in writing and signed by the student and must be filed by the student with that fficer within fifteen working days after the student receives notice of the classification ecision. The appeal is transmitted to the Residence Status Committee by that officer, who es not vote in that Committee on the disposition of such appeal. The student is notified the date set for consideration of the appeal, and, on request of the student, he or she is forded the opportunity to appear and be heard by the Committee. Any student desiring appeal a decision of the Residence Status Committee must give notice in writing of that ct (within ten days of receipt of the Committee's decision) to the Chairman of the sidence Status Committee, and the Chairman promptly processes the appeal for nsmittal to the State Residence Committee.

It is the responsibility of the student to pay tuition at the rate charged and billed while an peal is pending. In effect, the student who is classified a nonresident at the time of tuition ling pays the nonresident rate. Conversely, if a student is classified as a resident at the ne of billing, he or she pays the resident rate. Any necessary adjustments in the rate paid ll be made at the conclusion of the appeal.

pplication of the Law to Specific Situations

iens. Aliens who are permanent residents of the U.S. or who hold a visa which will permit eventual permanent residence in the U.S. are subject to the same considerations with respect to determination of legal residence as citizens. An alien abiding in the U.S. under a visa conditioned at least in part upon intent not to abandon a foreign domicile (B, F, H, and J visas) cannot be classified a resident. An alien abiding in the U.S. under a visa issued for a purpose which is so restricted as to be fundamentally incompatible with an assertion by the alien of bona fide intent to establish a legal residence (C, D, and M visas) cannot be classified a resident.

Possession of certain other immigration documents may also allow an alien to be considered for in-state tuition status. For more details aliens should consult their admissions offices and the Manual. Aliens must file a Residence Status Supplemental Form in addition to the forms normally required of applicants for resident status for tuition purposes.

Married Persons. The domicile of a married person, irrespective of sex, is determined by reference to all relevant evidence of domiciliary intent. No person is precluded, solely by reason of marriage to a person domiciled outside of North Carolina, from establishing or maintaining legal residence in North Carolina. No person is deemed, solely by reason of marriage to a person domiciled in North Carolina, to have established or maintained a legal residence in North Carolina. The fact of marriage and the place of the domicile of his or her spouse are deemed relevant evidence to be considered in ascertaining domiciliary intent.

If a person otherwise can demonstrate compliance with the fundamental statutory requirement that he or she be a legal resident of North Carolina before the beginning of the term for which resident status is sought, the second statutory requirement relating to duration of residence may be satisfied derivatively, in less than twelve months, by reference to the length of the legal residence of the person's spouse, if the spouse has been a legal resident of the State for the requisite twelve-month period.

Military Personnel. The domicile of a person employed by the Federal government is not necessarily affected by assignment in or reassignment out of North Carolina. Such a person may establish domicile by the usual requirements of residential act plus intent. No person loses his or her in-state resident status solely by serving in the armed forces outside of the State of North Carolina.

Minors. A minor is any person who has not reached the age of eighteen years. Under the common law, a minor child whose parents are not divorced or legally separated is presumed to have the domicile of his or her father. This presumption may be rebutted if a preponderance of the evidence indicates that the mother and father have separate domiciles and that, under the circumstances, the child can fairly be said to derive his or her domicile from the mother. If the father is deceased, the domicile of the minor is that of the surviving mother. If the parents are divorced or legally separated, the domicile of the minor is that of the parent having custody by virtue of a court order; or, if no custody has been granted by virtue of court order, the domicile of the minor is that of the parent with whom he or she lives; or, if the minor lives with neither parent, in the absence of a custody award, the domicile of the minor is presumed to remain that of the father. If the minor lives for part of the year with each parent, in the absence of a custody award, the minor's domicile is presumed to remain that of the father. These common law presumptions control even if the minor has lived in North Carolina for five years as set forth above in Burden of Proof and Statutory Prima Facie Evidence, subsection a.

In determining residence status for tuition purposes, there are three exceptions to the above provisions:

1. If a minor's parents are divorced, separated, or otherwise living apart and one parent is a legal resident of North Carolina, during the time period when that parent is entitled to claim, and does claim, the minor as a dependent on the North Carolina individual income tax return, the minor is deemed to be a legal resident of North Carolina for tuition purposes, notwithstanding any judicially determined custody award with respect to the minor.

   If, immediately prior to his or her eighteenth birthday, a person would have

been deemed to be a North Carolina legal resident under this provision but he or she achieves majority before enrolling in a North Carolina institution of higher education, that person will not lose the benefit of this provision if the following conditions are met:

a. Upon achieving majority the person must act, as much as possible, in a manner consistent with bona fide legal residence in North Carolina; and
b. The person must begin enrollment at a North Carolina institution of higher education not later than the fall academic term next following completion of education prerequisite to admission at the institution.

2. If, immediately prior to beginning an enrolled term, the minor has lived in North Carolina for five or more consecutive years in the home of an adult relative (other than a parent) who is a legal resident of North Carolina, and if the adult relative, during those years, has functioned as a de facto guardian of the minor, then the minor is considered a legal resident of North Carolina for tuition purposes. If a minor qualified for resident status for tuition purposes under this provision immediately prior to his or her eighteenth birthday, then, upon becoming eighteen, he or she will be deemed to be a legal resident of North Carolina of at least twelve months' duration.
3. Even though a person is a minor, under certain circumstances the person may be treated by the law as being sufficiently independent from his or her parents as to enjoy a species of adulthood for legal purposes. If the minor marries or obtains a judicial decree of emancipation under N.C. Gen. Stat. §7A-717, et seq., he or she is emancipated. The consequence, for present purposes, of such emancipation is that the affected person is presumed to be capable of establishing a domicile independent of that of the parents; it remains for that person to demonstrate that a separate domicile has, in fact, been established.

Prisoners. There are special provisions concerning domicile of prisoners. For more information, persons to whom these provisions may apply should consult the Manual.

Property and Taxes. Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

Students or prospective students who believe that they are entitled to be classified residents for tuition purposes should be aware that the processing of requests and appeals can take a considerable amount of time and that applications for classification should not be delayed until registration, when the number of applications makes accelerated handling impossible.

Military Tuition Benefit[1]

Certain members of the Armed Services, and their dependent relatives, who are not residents for tuition purposes may become eligible to be charged less than the out-of-state tuition rate under N.C. Gen. Stat. §116–143.3, the military tuition benefit provision. Any person seeking the military tuition benefit must qualify for admission to UNC-CH and must file an application for the benefit with his or her admissions office before the first day of classes of the term for which he or she initially seeks the benefit. To remain eligible to receive the military tuition benefit, he or she must file another application for the benefit before the first day of classes of the first term in which he or she is enrolled in each academic year. The burden of proving eligibility for the military tuition benefit lies with the applicant for the benefit, and the application and all required supporting affidavits must be complete and in proper order before the first day of classes of the term in question. Because of the time involved in securing the necessary affidavits from the appropriate military authorities, prospective applicants for the military tuition benefit are urged to secure application forms from their admissions offices and begin the application process several weeks before the first day of classes of the term for which they seek the benefit.

Eligibility of Members of the Armed Services. Eligible members of the Armed Servi pay a rate of tuition computed by applying a statutory formula which is dependent, in pa on the amount of money payable by their Service employer to them or to the institution by reason of their enrollment. Application of the statutory formula yields the following resu if the service member's education is being fully funded by the Service employer, the amount of tuition owed is equal to out-of-state tuition; if the member's education is not being funded by his or her Service employer, he or she pays an amount equal to in-state tuition; and if the Service employer is providing partial educational funding, the amount tuition owed depends on the amount of funding contributed by the Service employer.

To be eligible for this military tuition benefit, the individual must

a. be a member of the United States Air Force, Army, Coast Guard, Marine Corps, Navy, North Carolina National Guard, or a reserve component of one of these services; and
b. be abiding in North Carolina incident to active military duty which is performed or from a duty station in North Carolina.

Eligibility of Dependent Relatives of Service Members. If the service member meets conditions set forth above, his or her dependent relatives may be eligible to pay the in-st tuition rate if they share the service member's North Carolina abode; if they have compli with the requirements of the Selective Service System, if applicable; and if they qualify a military dependents of the service member.

If the service member voluntarily ceases to live in North Carolina or is involuntarily absent from the state on military orders (other than absences on routine maneuvers and temporary assignments), he or she is deemed to have moved his or her abode from Nor Carolina. If a dependent relative of a service member has become eligible for the militar tuition benefit and, after the beginning of the term of eligibility, the service member mov his or her abode from North Carolina, the dependent relative will continue to be eligible the military tuition benefit only for the remainder of that academic year. An academic ye runs from the first day of classes of the fall semester through the last day of exams of the following summer session, second term.

For a detailed explanation of the military tuition benefit provision (including an explanation of the formula used to compute the tuition rate for service members), a complete list of categories of persons who are considered "dependent relatives" for purposes of establishing eligibility for the military tuition benefit, and information about registration requirements of the Selective Service System, applicants should consult *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes* (as amended September 1985). This Manual is available for inspection in the Admissions Offices of the University. Copies of Manual are also on reserve at the Robert B. House Undergraduate Library and in the Reserve Reading Room of the Health Sciences Library.

Appeals of Eligibility Determinations of Admissions Officers. A student appeal of a eligibility determination made by any admissions officer must be in writing and signed b the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the eligibility determination. The appeal is transmitted the Residence Status Committee by that officer, who does not vote in that Committee on disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded an opportunity to appear and be heard by the Committee.

Any student desiring to appeal a determination of the Residence Status Committee mu

1 The information in this section comes from three sources: (i) North Carolina General Statutes, §116–143.1, (ii) *A Manual to Assist the Public Higher Eduction Institutions of North Carolina in The Matter of Student Residence Classification for Tuition Purposes*, Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes.

give notice in writing of that fact to the Chairman of the Residence Status Committee within ten days of receipt of the Committee's decision. The Chairman will promptly process the appeal for transmittal to the State Residence Committee.

Family Educational Rights and Privacy Act

As a general rule, under the federal Family Educational Rights and Privacy Act (FERPA), personally identifiable information may not be released from a student's education records without his or her prior written consent. Exceptions to this rule are set out in the FERPA regulations and the FERPA policy of The University of North Carolina at Chapel Hill.

UNC-CH will disclose personally identifiable information from the education records of a student, without the student's prior written consent, to officials of another school or school system in which the student seeks or intends to enroll. UNC-CH will also disclose personally identifiable information from an enrolled student's education records, without the student's prior written consent, to officials of another school or school system in which the student is contemporaneously enrolled. Time, building, and room number information from a student's class schedule will be disclosed to the University Police to assist them in serving the student with a warrant or subpoena.

UNC-CH makes public certain information that has been designated as "directory information": the student's name, address, telephone listing, date and place of birth, major field of study, class, enrollment status (full-time, half-time, or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. Examples of ways in which some of this information is made public include: names of students who receive honors and awards, who make the Dean's List, who hold offices, or who are members of athletic teams. The annual commencement program publishes the names of degree recipients. The University also publishes the Campus Directory annually, and some professional and graduate student groups publish directories of students in their departments or schools.

Students who do not wish to have any or all "directory information" made public without their prior consent, must send the Office of the University Registrar (CB# 2100, 105 Hanes Hall, The University of North Carolina at Chapel Hill) a signed and dated notice specifying items that are not to be published. To ensure that a listing for the student will not appear in the Campus Directory, this notice must be received by the Office of the University Registrar by the end of the registration period for the semester or session of first enrollment or, after an absence, of reenrollment. Such a notice will be honored until the student graduates, ceases to attend, or withdraws from the University unless the student notifies the Office of the University Registrar to the contrary in writing.

Students also have the right to inspect their "education records" as defined in the FERPA regulations. They may not inspect financial records and statements of their parents; confidential letters of recommendation placed in their education records before January 1, 1975 (with some exceptions); or confidential letters of recommendation placed in their education records after January 1, 1975, if they have waived their rights to inspect and review such letters.

A student who believes that information in his or her education records is inaccurate or misleading or violates his or her privacy or other rights may request that the institution amend the records, and, if the request is denied, he or she has the right to a hearing. If, after the hearing, the institution decides that the information is not inaccurate, misleading, or violative of privacy or other rights, the student has a right to place a statement in those records commenting on the information in question or giving the student's reasons for disagreeing with the institutional decision. The student may also place such a statement in his or her records in lieu of requesting a hearing if the student and the institution agree that an explanatory statement alone is the appropriate remedy. Complaints alleging violations of FERPA rights may also be filed with the U.S. Department of Education.

Questions about FERPA should be addressed to the Legal Adviser to the Special Assistant to the Chancellor (CB# 9150, 01 South Building). The text of FERPA and its regulations and the University's FERPA policy are also available for inspection in 01 South Building.

Firearms and Other Weapons

The possession of any gun, rifle, pistol, dynamite cartridge, bomb, grenade, mine, explosive, bowie knife, dirk, dagger, slingshot, leaded cane, switchblade knife, blackjack, metallic knuckles, or any other weapons of like kind upon any University campus or in any University-owned or operated facility is unlawful and contrary to University policy. Violation of this prohibition is a misdemeanor punishable by a fine not to exceed $500 and/or six months' imprisonment, and may constitute a violation of the Campus Code.

Immunization Requirement

Effective July 1, 1986, North Carolina State law requires that no person shall attend a college or university in North Carolina unless a certificate of immunization indicating that the person has received the immunizations required by the law is presented to the college or university on or before the first day of matriculation. Students enrolled at UNC-CH on July 1, 1986 are exempt from this requirement.

If the UNC-CH Medical History Form containing the certificate of immunization is not in the possession of the UNC-CH Student Health Service ten (10) days prior to the registration date, the University shall present a notice of deficiency to the person. The person shall have 30 calendar days from the first day of attendance to obtain the required immunizations. Those persons who have not complied with the immunization requirements by the end of 30 calendar days will be administratively withdrawn from the University.

Policy on Illegal Drugs

I. INTRODUCTION

The Board of Trustees of The University of North Carolina at Chapel Hill, in conformity with the direction of the Board of Governors of The University of North Carolina, hereby adopts this Policy on Illegal Drugs, effective August 24, 1988. It is applicable to all students, faculty members, administrators and other employees.

II. EDUCATION, COUNSELING, AND REHABILITATION

A. The University of North Carolina at Chapel Hill has established and maintains a program of education designed to help all members of the university community avoid involvement with illegal drugs. This educational program emphasizes these subjects:
   1. The incompatibility of the use or sale of illegal drugs with the goals of the university;
   2. The legal consequences of involvement with illegal drugs;
   3. The medical implications of the use of illegal drugs; and
   4. The ways in which illegal drugs jeopardize an individual's present accomplishments and future opportunities.

B. The University of North Carolina at Chapel Hill provides information about drug counseling and rehabilitation services available to members of the university community through campus-based programs and through community-based

organizations. Persons who voluntarily avail themselves of university services are hereby assured that applicable professional standards of confidentiality will be observed.

III. ENFORCEMENT AND PENALTIES

A. The University of North Carolina at Chapel Hill shall take all actions necessary, consistent with State and Federal law and applicable university policy, to eliminate illegal drugs from the university community. The University's Policy on Illegal Drugs is publicized in catalogs and other materials prepared for all enrolled and prospective students and in materials distributed to faculty members, administrators and other employees.

B. Students, faculty members, administrators, and other employees are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the university community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the university. It is not ""double jeopardy" for both the civil authorities and the university to proceed against and punish a person for the same specified conduct. The university will initiate its own disciplinary proceeding against a student, faculty member, administrator, or other employee when the alleged conduct is deemed to affect the interests of the university.

C. Penalties will be imposed by the university in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees, as required by Section 3 of the Trustee Policies and Regulations Governing Academic Tenure in The University of North Carolina at Chapel Hill, by Section III.D of the Employment Policies for EPA Nonfaculty Employees of The University of North Carolina at Chapel Hill, by regulations of the State Personnel Commission, and the Disciplinary Procedure of the Staff Personnel Administration Guides (SPAG 37), by the Instrument of Student Judicial Governance, and by all other applicable provisions of the policies and procedures of The University of North Carolina at Chapel Hill.

D. The penalties to be imposed by the university may range from written warnings with probationary status to expulsions from enrollment and discharges from employment. However, the following minimum penalties shall be imposed for the particular offenses described.

1. Trafficking in Illegal Drugs
   a. For the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90 (including, but not limited to, heroin, mescaline, lysergic acid diethylamide, opium, cocaine, amphetamine, methaqualine), any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.
   b. For a first offense involving the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, (including, but not limited to, marijuana, anabolic steroids, pentobarbital, codeine), the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[1] For a second offense, any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.
2. Illegal Possession of Drugs
   a. For a first offense involving the illegal possession of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90, the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[2]
   b. For a first offense involving the illegal possession of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, the minimum penalty shall be probation, for a period to be determined on a case-by-case basis. A person on probation must agree to participate in a drug education and counseling program, consent to regular drug testing, and accept such other conditions and restrictions, including a program of community service, as the Chancellor or the Chancellor's designee deems appropriate. Refusal or failure to abide by the terms of probation shall result in suspension from enrollment or from employment for any unexpired balance of the prescribed period of probation.
   c. For a second or other subsequent offense involving the illegal possession of controlled substances, progressively more severe penalties shall be imposed including expulsion of students and discharge of faculty members, administrators, or other employees.[3]

E. Suspension Pending Final Disposition

When a student, faculty member, administrator, or other employee has been charged by the university with a violation of policies concerning illegal drugs, he or she may be suspended from enrollment or employment before initiation or completion of regular disciplinary proceedings if, assuming the truth of the charges, the Chancellor, or in the Chancellor's absence, the Chancellor's designee concludes that the person's continued presence within the university community would constitute a clear and immediate danger to the health or welfare of other members of the university community; provided, that if such a suspension is imposed, an appropriate hearing of the charges against the suspended person shall be held as promptly as possible thereafter.

IV. IMPLEMENTATION AND REPORTING

Annually, the Chancellor shall submit to the Board of Trustees a report on campus activities related to illegal drugs for the preceding year. The reports shall include, as a minimum, the following:

(1) a listing of the major education activities conducted during the year;
(2) a report on any illegal drug-related incidents, including any sanctions imposed;
(3) an assessment by the Chancellor of the effectiveness of the campus program and;
(4) any proposed changes in the Policy on Illegal Drugs.

A copy of the report shall be provided to the President, who shall confer with the Chancellor about the effectiveness of campus programs.

[1] Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[2] Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[3] If this balance for an employee subject to the State Personnel Act exceeds three days, that employee shall be discharged.

UNC-CH News Services/ A. Hawthorne

For more information about the School of Public Health contact:
The Office of Student Services
School of Public Health
CB # 7400
Rosenau Hall
The University of North Carolina at Chapel Hill
Chapel Hill, North Carolina 27599-7400

For information about graduate programs call (919) 966-2499.
For information about the undergraduate program call (919) 966-6331.

Published by
The University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

Harriet H. Barr, Executive Editor
April A. Hoyle, Designer & Editor

Design support provided by Office of Design Services

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- __health-related publication
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- __UNC alumni publication
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- __ other conference_____

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2. What is most appealing to you about UNC's School of Public Health?

3. What is least appealing about UNC's School of Public Health?

4. Please name some of the other schools of public health that interest you, if any.

5. What about the other schools or their programs is most attractive?

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Undergraduate Bulletin '93-'94

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The Undergraduate Bulletin
Fall 1993-Fall 1994 Record

Number 1070

Although the publisher of this bulletin has made every reasonable effort to attain factual accuracy herein, no responsibility is assumed for editorial, clerical, or printing errors or errors occasioned by mistakes. The publisher has attempted to present information which, at the time of preparation for printing, most accurately describes the course offerings, faculty listings, policies, procedures, regulations, and requirements of the University. However, it does not establish contractual relationships. The University reserves the right to alter or change any statement contained herein without prior notice.

Published by the University of North Carolina at Chapel Hill, Chapel Hill, NC

Send All Undeliverable Copies and Changes of Address to
The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599

20,000 copies of this public document were printed at a cost of $26,820, $1.341 per copy.

Statement on Equal Educational Opportunity
The University of North Carolina at Chapel Hill is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, sex, age, or disability. Any complaints alleging failure of this institution to follow this policy should be brought to the attention of the Assistant to the Chancellor. Moreover, The University of North Carolina at Chapel Hill is open to people of all races and actively seeks to promote integration by recruiting and enrolling a larger number of black students.

Policy on Nondiscrimination
It is the policy of The University of North Carolina at Chapel Hill that educational and employment decisions should be based on individuals' abilities and qualifications and should not be based on irrelevant factors or personal characteristics that have no connection with academic abilities or job performance. Among the traditional factors which are generally "irrelevant" are race, sex, religion, and national origin. It is the policy of The University of North Carolina at Chapel Hill that an individual's sexual orientation be treated in the same manner. This policy prohibiting discrimination on the basis of sexual orientation does not apply to the University's relationship with outside organizations, including the federal government, the military, ROTC, and private employers.

Graduation Rate
Pursuant to the federal Student Right-to-Know Act, we report that, in 1991-92, the completion or graduation rate for students who entered The University of North Carolina at Chapel Hil in 1986 on a full-time basis was 81.7 percent.

The Honor Code: *It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and to support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student, or academic personnel acting in an official capacity.*

The Campus Code: *And it shall be the further responsibility of every student to abide by the Campus Code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of other in the University community.*

Chancellor's Greeting

The University of North Carolina at Chapel Hill is a place of boundless opportunity. It is vibrantly alive, bursting with ideas, questioning and probing the unknown, teeming with people who are passionate about pushing the limits of knowledge, and using that knowledge to serve the global community of which we are citizens.

In the approaching years, we will embark upon the University's third century. Our Bicentennial Observance in 1993 marks the 200th anniversary of the founding of the University and the birth of public higher education, a uniquely American idea first brought to life right here in Chapel Hill.

Today, Carolina is a place where intelligent and inquisitive students with varied talents and interests, different cultural backgrounds, and diverse dreams and aspirations come together to learn and to grow.

The faculty of the University is among the most outstanding in the country. Our libraries are among the finest in the Southeast. The curriculum for undergraduates places emphasis on a sound basic education and, with the guidance of the faculty, on a balanced experience in the arts and sciences.

To the occasional visitor, the most striking aspect of the University in Chapel Hill is the beauty of the campus - especially magnificent in the spring and fall. This natural beauty provides the perfect backdrop for the outstanding drama, music, literature, and visual arts that contribute so much to the richness and vitality of life in Chapel Hill.

One measure of a University's greatness is the pride and loyalty of its students and alumni. It is remarkable that so many alumni return to Chapel Hill to visit, encourage talented students to apply for admission, volunteer their talents and service to the University, and support it with their generous gifts.

The Carolina experience can be a great adventure. It is the excitement of discovery and the satisfaction of accomplishment. It is quiet reflection and the vigorous pursuit of knowledge. It is hard work and dedication, strong friendships, and great fun.

Those who choose - and are chosen - to come to Carolina have a special opportunity. The faculty and I look forward to welcoming the members of each new class, for we know that each of them will help to write an exciting new chapter in Carolina's history.

Paul Hardin
Chancellor

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The University of North Carolina at Chapel Hill: An Introduction

Visiting Campus

Visitors are always welcome at The University of North Carolina at Chapel Hill.

When arranging a visit to campus, contact the **UNC-Chapel Hill Visitors' Center at (919) 962-1630 or write: Visitors' Center, Morehead Building and Planetarium, Chapel Hill, NC 27599-3475**. At the center, visitors can obtain general information about the University, view a lighted model of campus, or watch a video guide to touring campus.

Limited visitors' parking is available near the Visitors' Center at the Morehead Building and Planetarium, in front of the Undergraduate Admissions office in Jackson Hall, and in designated spots near Hanes Hall.

A campus map is located prior to the index of this publication. A more in-depth campus map may be purchased at Student Stores in the Daniels Building and at the Visitors' Center.

Overnight accommodations are usually available (except on football weekends, Commencement, and other special occasions) at the Carolina Inn, near the center of the University. Call the Carolina Inn at (919) 933-2001 for overnight reservations.

Numerous other hotels are in the Durham-Chapel Hill vicinity. Persons planning to visit campus should seek reservations well in advance.

Offices of the University are open from 8 a.m. to 5 p.m. Monday through Friday, but are normally not open during holidays. While visiting campus, please do not enter classrooms or residence hall rooms when they are in use.

Using the Undergraduate Bulletin

The Undergraduate Bulletin is a valuable tool that prospective and enrolled students can use to their benefit throughout their days at The University of North Carolina at Chapel Hill. The Bulletin supplies general information about the University to prospective students and their parents. It includes information about application procedures and about orientation and matriculation for students who have been accepted.

Academic regulations, University facilities, and college life also are described. Departmental degree requirements and course offerings are included, but students in some specialized curricula will be referred to other publications for additional information. Enrolled students are encouraged to use the Bulletin in addition to talking with their faculty advisers.

This bulletin is concerned primarily with prospective students and with undergraduates enrolled in the General College, the College of Arts and Sciences, and the schools of Business, Education, Journalism and Mass Communication, Dentistry, Medicine, Nursing, Pharmacy, and Public Health.

The following catalogs and admissions brochures are published by The University of North Carolina at Chapel Hill: Kenan-Flagler Business School, Graduate School of Business Administration, Department of City and Regional Planning, School of Dentistry, School of Education, The Graduate School, School of Journalism and Mass Communication, School of Law, School of Information and Library Science, School of Medicine, School of Nursing, School of Public Health, School of Social Work, Department of Statistics, and Summer School.

Corresponding With the University

Prospective students will conduct most of their business with the University's Office of Undergraduate Admissions. Campus visitors can find the office in Jackson Hall on Country Club Road. The mailing address is **Undergraduate Admissions, Jackson Hall, CB# 2200, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-2200**.

After being formally accepted, students may have questions about housing and accommodations. If so, students can contact the **Department of Housing in Carr Building, CB# 5500 or call (919) 962-5101**.

Students with problems in their programs of study should establish contact with the academic dean in that area. The General College, with offices in Steele Building, telephone (919) 966-5116, is responsible for all freshmen, except those in Dental Hygiene, who should communicate directly with their department. **The Office of Scholarships and Student Aid, 300 Vance Hall, CB# 2300, telephone (919) 962-8396**, has general charge of scholarships, grants, job opportunities, and loans.

Telephone calls to any office or person in the University system can be completed through the University operator in Chapel Hill when the caller does not know the direct number. The operator's number is (919) 962-2211.

A lost and found office is maintained in the basement of the Carolina Union by Alpha Phi Omega service fraternity, telephone (919) 962-1044.

Campus Tour For Prospective Students

Tours for prospective students begin at 10 a.m. and 2 p.m. each weekday during fall and spring semesters except on University holidays. Tours begin at the Office of Undergraduate Admissions, and are led by Carolina students. To make reservations, call (919) 966-3621 or write: **Undergraduate Admissions, CB# 2200, Jackson Hall, Chapel Hill, NC 27599.**

Obtaining an Undergraduate Bulletin

Accepted freshmen will receive a free Undergraduate Bulletin. Thereafter, students can refer to new editions of the Bulletin by purchasing one from Student Stores either in person or by mail. For information about purchasing the Bulletin, write:

Student Stores
The University of North Carolina at Chapel Hill
Daniels Building, CB# 1530
Chapel Hill, NC 27599-1530

Reference copies of the Bulletin also are available at campus libraries and with each student's faculty adviser.

Reaching the Office of Undergraduate Admissions

The starting point for most prospective students is the University's Office of Undergraduate Admissions. The office and its knowledgeable personnel help prospective students understand the requirements and procedures of applying for admission to UNC- Chapel Hill. Admissions personnel can be reached at **Undergraduate Admissions, Jackson Hall, CB# 2200, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-2200. The telephone number is (919) 966-3621.**

The University's Bicentennial Observance

The Bicentennial Observance of The University of North Carolina at Chapel Hill commemorates the birth of public higher education, a uniquely American idea that first took root in North Carolina 200 years ago.

The Observance begins on October 12, 1993, and concludes on May 15, 1994.

During the Bicentennial, the University is hosting a variety of public events, scholarly programs, and other activities designed to:

- strengthen the bonds between the people of North Carolina and their University,
- re-affirm the University's historical commitment to free inquiry in the pursuit of knowledge,
- lay the cornerstone for the University's third century of service to the state, nation, and world.

The University of North Carolina at Chapel Hill: History of the University

By William S. Powell, *Professor Emeritus*
Department of History

The University of North Carolina was anticipated by a section of the first state constitution drawn up in 1776 directing the establishing of "one or more universities" in which "all useful learning shall be duly encouraged and promoted." State support, it directed, should be provided so that instruction might be available "at low prices." The American Revolution intervened and it was not until 1789, the year that George Washington became president of the new nation, that the University was chartered by the General Assembly.

Despite constitutional instructions to the contrary, no state appropriations were made, and the trustees were left to secure land and money themselves. On October 12, 1793 the cornerstone was laid for a brick building on a hilltop near the center of the state amidst the colorful fall foliage of dogwood, oak, and tulip trees.

The site, lying at the crossing of north-south and east-west roads, was marked only by a small Anglican chapel that soon shared part of its name - New Hope Chapel Hill - with the community that developed there. Legislator and trustee William R. Davie, who had been instrumental in securing passage of the charter, took the lead in organizing the University. Davie presided over the Masonic ritual of the laying of the cornerstone. In time he came to be called "the Father of the University." Many years later a large poplar or tulip tree, first mentioned in 1818 and still standing near the center of the old campus, was called Davie Poplar in his honor.

The first building and, indeed, the only building for two years, was a two-story brick structure that came to be called Old East. It is now a National Historic Landmark, the oldest state university building in America. Opened to students on January 15, 1795, The University of North Carolina received its first student, Hinton James of New Hanover County, on February 12. By March there were two professors and forty-one students present.

The second state university did not begin classes until 1801 when a few students from nearby academies assembled under a large tree at Athens, Georgia, for instruction. By then four classes had already been graduated at Chapel Hill and there were to be three more before the first diplomas were issued in Georgia. The next building on the Carolina campus was Person Hall, begun in 1796 and long used as the chapel. The cornerstone of Main or South Building was laid in 1798. All three are older than any other American state university building.

During the early nineteenth century the trustees began a period of strong support in the development of the young University. Even though their proclaimed initial goal for the University had been to provide trained leadership for the state, the curriculum followed the customary classical trend. In 1815, however, the natural sciences were given equal place, and in the 1820s Professors Denison Olmstead and Elisha Mitchell prepared the nation's first geological survey. In 1831 the first astronomical observatory at a state university was built under the direction of President Joseph Caldwell. Student enrollment increased steadily, and by 1860 only Yale College had more students.

Young men from many states came to Chapel Hill for their education, particularly those from families who had recently left North Carolina to settle elsewhere in the South. The University of North Carolina provided governors not only for North Carolina but also for many other states; countless professions and occupations were represented, including cabinet members, clergymen, diplomats, engineers, geologists, judges, legislators, surveyors, teachers, and a president and a vice-president of the United States among others.

The Civil War was responsible for the closing of many colleges and universities, but the University was one of the few Southern institutions to remain open throughout the war. During Reconstruction, however, it was closed from

1870 until 1875; buildings had deteriorated, equipment had disappeared during the Federal occupation of the campus, and politicians attempted to direct the course of the University by naming professors, trustees, and other officers.

With a change in the political leadership of the state, however, the University reopened under new trustees who soon began to inaugurate programs that once again marked it as a leading university. A program of graduate study for advanced degrees was announced in 1876. The first university summer school for teachers anywhere in America opened in Chapel Hill in 1877, and two years later medical and pharmaceutical courses were established as regular offerings.

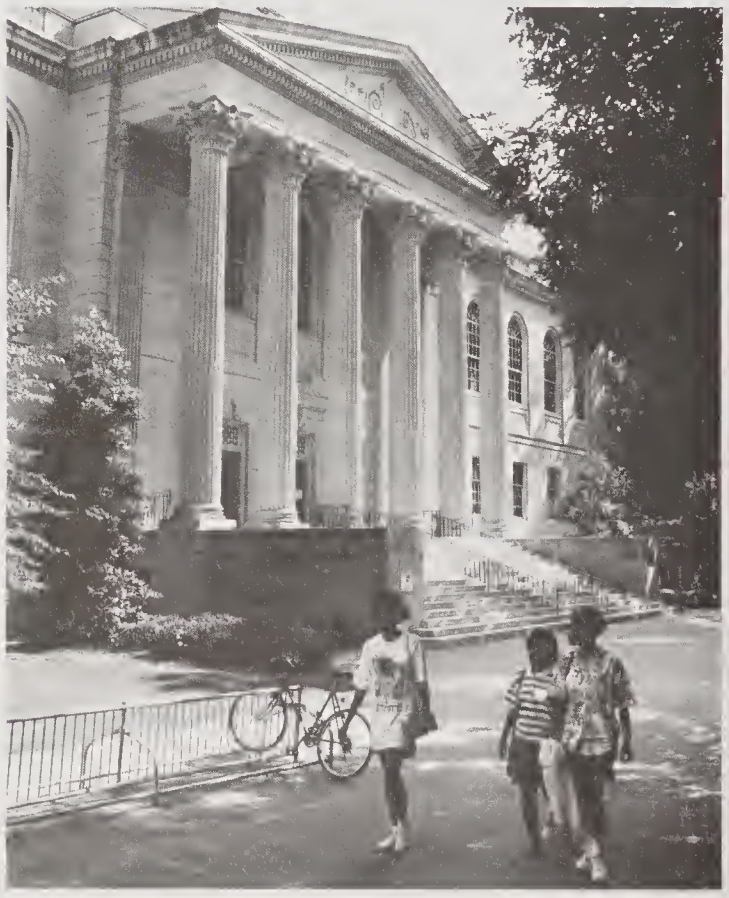
Heretofore the University had survived on student fees, gifts, escheats, and other minor sources of income. All of the buildings on the campus had been erected through the generosity of alumni and other benefactors. In 1881, however, after nearly a century of precarious existence, the University received the first legislative appropriation for its support.

Although many teachers in the academies and common schools of the state were trained at the University, it was not until 1885 that a teacher training program became an established part of the curriculum. In 1894 the law school was incorporated into the course of study offered by the University, and in 1897 the first woman student was admitted. By the end of the century there were 512 students enrolled with a faculty of thirty-five. By the Commencement of 1900 thirty-one master's degrees and seven doctoral degrees had been awarded - the first of each in 1883.

An outstanding example of the new research role of the University occurred in 1892. William Rand Kenan, Jr., working in the University laboratory of Professor Francis P. Venable, participated in experiments that resulted in the identification of calcium carbide and the development of a formula for making acetylene gas.

With the beginning of the twentieth century the University entered a period of renewed growth and service. In 1904 the first chapter of Phi Beta Kappa in North Carolina was established at the University. In 1913 the offerings in the field of education were reorganized as the School of Education, while the Bureau of Extension was created to make the University's resources more widely available to people across the state. Special notice was taken in 1915 when student enrollment for the first time reached one thousand. It was in 1915 that alumnus Isaac E. Emerson gave the University a stadium for the athletic field. In 1927 William Rand Kenan, Jr., donated the football stadium.

The endowed Kenan professorships fund, established in 1917, provided further incentive for excellence in teaching and research. In 1919 the School of Commerce, now the Kenan- Flagler Business School, was established. The School of Public Welfare began in 1920 as an outgrowth of the Department of Sociology. Thirty years later its name was changed to School of Social Work. In 1922 the University was elected to membership in the Association of American Universities. The UNC Press also was incorporated that year, while two years later the Institute for Research in Social Science was organized. By 1930 there were 2,600 students at the University and a faculty of 222 full- and 85 part-time members. Teaching, study, and research took place at undergraduate, graduate, and



professional levels in twelve colleges and schools and in twenty-one departments.

The General Assembly in 1931 consolidated the University with the Woman's College at Greensboro and North Carolina State College at Raleigh under a single Board of Trustees. As an economy measure during the Depression and as a means of eliminating duplication, the trustees allocated each unit specific roles in higher education for the state. The offices of the Consolidated University were established on the Chapel Hill campus and University President Frank Porter Graham became the Consolidated University's first president.

The period of the Depression in the 1930s saw a great deal of new construction on the campus as Federal funds became available to create jobs for the unemployed. New dormitories, classroom buildings, a gymnasium, and other buildings and improvements were built in part from this source. World War II also resulted in some new construction and alterations on campus as the University's facilities were used to train military personnel.

In 1931 the School of Library Science was established and the Institute of Government founded. The latter, first of its kind in the nation, became an official part of the University in 1942. In 1936 the School of Public Health was formed. A Naval ROTC unit was created in 1940 and joined by the Air Force ROTC unit in 1947.

The Division of Health Affairs was formally organized in 1949, with schools of Dentistry and Nursing added to the schools of Medicine, Pharmacy, and Public Health. The University thereby became one of the few in the nation with schools in the five health professions. The opening of North Carolina Memorial Hospital in 1952 provided clinical facilities for the schools.

The Morehead Building and Planetarium were completed in 1949, and in the next year the School of Journalism was organized, although courses in journalism had been offered for many years. In 1990 the School became the School of Journalism and Mass Communication. The William Hayes Ackland Art Museum was completed in 1958 and in the following year the University became one of the first to install a large computer system.

As the twentieth century neared its end, the campus became the scene of further changes. The Walter Royal Davis Library was dedicated in 1985 and soon afterwards the renovated L. R. Wilson Library was opened to house the Special Collections. Other new building projects include the Smith Center for athletic and cultural events, the Kenan Center, Fetzer Gymnasium, Carmichael Residence Hall, and new facilities for the departments of Art, Chemistry, and Computer Science. In the medical complex, Memorial Hospital's Critical Care Center, the Lineberger Cancer Research Building, the Public Health and Environmental Sciences Building, and a new building for the Department of Family Medicine were completed.

By 1990 the campus was the site of nearly two hundred permanent buildings. More than 22,000 students were enrolled and the faculty consisted of around 1,900 full-time members. The Alumni Association counted more than 168,000 living alumni. During its almost two centuries, the University has trained just over 754,000 men and women exclusive of those who attended summer school or special courses.

The University has been recognized for the quality of its graduate programs in every national survey conducted in the past third of this century. The News and World Report's survey of American colleges and universities consistently ranks the University among the best colleges in the nation and among the top research universities.

These accolades reflect the quality of the curriculum and of the faculty, whose research orientation allows them to share with their students not only the thrill of discovery, but also the latest advancements and new knowledge. Another asset that contributes to this reputation is UNC-Chapel Hill's superb library system containing more than three million volumes. It is ranked among the top research libraries in the United States and Canada by the Association of Research Libraries.

The University during its Bicentennial year is the most comprehensive institution in North Carolina, both in the range of its programs at all levels and in the breadth of its specialized research and public service programs. The University's fourteen colleges and schools provide instruction in more than a hundred fields, offering 67 baccalaureate, 88 master's, and 61 doctoral programs, as well as professional degrees in dentistry, medicine, pharmacy, law, and library science. It has more than remained faithful to its founding fathers' charge to duly encourage and promote all useful learning for the betterment of humanity.

Fall Semester, 1993

March

20 Saturday — Telephone Registration Period I (TR I) begins according to CAROLINE Telephone Registration Schedule.

July

16 Friday — TR I closes at 8:00 P.M.

August

12 Thursday — Telephone Registration Period II begins for all students except new freshmen.

21 Saturday — Residence halls open for freshmen and transfer students at 10:00 A.M.

22 Sunday — Orientation of all new freshmen and under graduate transfer students according to schedule to be announced. Residence halls open for returning students. Telephone registration period II opens for new freshmen

25 Wednesday — Classes begin for all students. $10 fee charged for late registration.

31 Tuesday — Last day to add a course and end of late registration. No registration or course adds accepted through telephone registration after 8:00 P.M.

September

6 Monday — Holiday, Labor Day.

7 Tuesday — Last day to reduce course load for credit on a student's financial account. Telephone registration period II closes at 8:00 P.M. (Dropping only course requires official withdrawal.)

October

5 Tuesday — Last day for dropping courses (Undergradu ates) and last day for pass/fail declarations.

12 Monday — Holiday, University Day.

15 Friday — Last day for graduates and undergraduates to file with their Dean's Office for degree to be awarded in December.

19 Tuesday — Incompletes (IN's) from prior terms change to F* (undergraduates only).

20 Wednesday — Fall recess, instruction ends 5 p.m.

25 Monday — Instruction resumes 8:00 A.M.

26 Tuesday — Last day to withdraw for credit on student's financial account (prorated over nine weeks).

November

6 Saturday — Written examinations for Master's candidates for December graduation may not be taken after this date.

24 Wednesday — Instruction ends 1:00 P.M. - Thanksgiving Recess

29 Monday — Instruction resumes 8:00 A.M.

29 Monday — Last day for graduate students to drop a course.

December

9 Thursday — Fall semester classes end.

10 Friday — Final signed copies of doctoral dissertations and master's theses for candidates for the December graduation must be filed in the Graduate School by this date.

10 Friday — Reading day.

11 Saturday — Fall semester examinations begin.

12 Sunday — Fall Recognition Ceremony.

18 Saturday — Fall semester examinations end.

Spring Semester, 1994

October

18 Monday — Spring advising begins according to school policy (see Advising Sessions in the Directory of Classes.)

23 Saturday — CAROLINE Telephone Registration Period I (TRI) begins according to Telephone Registration Schedule (See Directory of Classes.)

December

9 Thursday — Tuition and fees due for all students.

20 Monday — Telephone resigstration period II (TR II) begins

January

9 Saturday — Residence halls open.

10 Monday — Classes begin for all students. Late registration begins. $10 fee charged for late registration.

14 Friday — Last day to add a course and end of late registration No registration or course adds accepted through telephone after 8:00 P.M.

17 Monday — Holiday, Martin Luther King Day. (Telephone registration closed.)

21 Friday — Last day to reduce course load for credit on student's financial account. (Dropping only course requires official withdrawal.) Last day for both undergraduate and graduate students to file with their Dean's Office an application for degree to be awarded in May. Telephone Registration Period II closes at 8:00 P.M.

February

18 Friday — Last day for dropping courses (undergradu ates) and last day for Pass/Fail declaration.

March

4 Friday — Incompletes (IN's) from prior terms change to F* (undergraduates only).

4 Friday — Spring Recess Classes end 5:00 P.M.

14 Monday — Classes resume 8:00 A.M.

11 Friday — Last day to withdraw for credit on student's financial account. (Tuition and fees prorated over nine weeks plus $25.00.)

19 Saturday — Written examinations for master's candidates for May graduation may not be taken after this date.

April

1 Friday — Holiday, Good Friday.

12 Tuesday — Last day for graduate students to drop a course.

27 Wednesday — Spring semester classes end.

27 Wednesday — Final signed copies of doctoral dissertations and master's theses for candidates for the May graduation must be filed in the Graduate School by this date.

28 Thursday — Reading day.

29 Friday — Spring semester examinations begin.

May

6 Friday — Examinations end.

15 Sunday — Commencement.

The University calendar does not recognize religious holidays. The faculty are encouraged to make reasonable accommodations for students requesting to miss class due to the observance of religious holidays.

The University of North Carolina at Chapel Hill: Officers of Administration

Paul Hardin, J.D., *Chancellor*

Susan Haughton Ehringhaus, J.D., *Assistant to the Chancellor and Senior University Counsel*

Douglass Hunt, LL.B., *Special Assistant to the Chancellor*

Mary P. Sechriest, J.D., *Associate University Counsel and Legal Adviser to the Special Assistant*

David D. Dill, Ph.D., *Assistant to the Chancellor for Planning*

Robert J. Cannon, Ph.D., *Affirmative Action Officer*

John D. Swofford, M.Ed., *Director, Athletics*

Brenda W. Kirby, *Secretary to the University*

Donald Arthur Boulton, Ed.D., *Vice-Chancellor and Dean, Student Affairs*

Don L. Collins, M.Ed., *Director, Assistant to Vice-Chancellor for Student Affairs and Director of Development and Marketing*[1]

Judith R. Cowan, M.D., *Director, Student Health Service*

John W. Edgerly, Ed.D., *Director, University Counseling Center*

Marcia B. Harris, M.Ed., *Director, University Career Services*

Wayne T. Kuncl, Ed.D., *Director, University Housing*

Sherry B. Morrison, M.Ed., *Assistant to the Vice-Chancellor for Planning and Evaluation*

Laura D. Thomas, M.S., *Director Disability Services*

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Margo A. Crawford, M.Ed., *Director, Black Cultural Center*

Robert J. Locke, Ed.D., *Director, International Center*

Archie W. Copeland, M.S., *Director, Frank Porter Graham Student Union*[2]

Donald E. Luse, M.Ed., *Director, Frank Porter Graham Student Union*[3]

Zenobia Hatcher-Wilson, M.S.W., *Director, Campus Y*

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Cynthia Wolf Johnson, M.A., *Director, North Carolina Fellows Program/Leadership Development*

Frederic William Schroeder, Jr., M.S., *Assistant Vice-Chancellor and Dean of Students*

Howard J. Brubaker, M.S., *Director, Student Activities Fund Office*

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Don Collins, M. Ed., *Director of Chancellor's Club*[5]

Leola G. Collura,, *Director of Donor and Prospect Research*

Marjorie Crowell, B.A., *Director of Annual Fund*

Judy C. Fleming, B.A., *Director of Reunions*

Ben Hughes, B.S., *Director of Regional/Major Gifts*

C. Knox Massey, *Special Assistant to the Chancellor*

Ivana Pelnar-Zaiko, B.A., *Director of Principal Gifts*

James S. Simmons, Jr., M.F.A., *Director of Corporate and Foundation Relations*

June L. Steel, B.A., *Director of Planned Giving*

Abbe Townsend, B.A., Director, *Special Events*

Nancy K. Davis, A.B., *Director of Development Communications*[6]

Jean M. Vickery, B.A., *Director of Development Services*

Clifton Metcalf, B.A., *Associate Vice-Chancellor for University Relations/General Secretary of the Bicentennial Observance*[7]

Clifton Metcalf, B.A., *Associate Vice-Chancellor for University*[8]

Nancy Ahrens, B.A., *University Designer, Design Services*[9]

Margaret Plumb Balcom, A.B., *Editor, University Gazette*

Bill Davis, M.J., *General Manager, WUNC (FM) Radio*

H. Scott Jared, B.S., *Coordinator, Publications Services*

Clifton Metcalf, B.A., *Director, University News Services*[10]

Steven Tepper, B.A., *Associate General Secretary for Bicentennial Observance*

Catherine Williams, B.A., *Director, Special Projects*

Paul Baldasare, Jr., J.D., *Assistant to the Vice-Chancellor, Legal Affairs, Associate University Counsel*

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Stuart Bondurant, M.D., *Dean, School of Medicine*

Laurel Archer Copp, Ph.D., *Dean, School of Nursing*[11]

Cynthia M. Freund, Ph.D., R.N., S.A.A.N., *Acting Dean, School of Nursing*[12]

Cynthia M. Freund, Ph.D., R.N., S.A.A.N., *Dean, School of Nursing*[13]

Michel A. Ibrahim, M.D., Ph.D., *Dean, School of Public Health*

Tom S. Miya, Ph.D., Dean, *School of Pharmacy*[14]

William H. Campbell, Ph.D., *Dean, School of Pharmacy*[15]

Don Bailey, Ph.D., *Director, Frank Porter Graham Child Development Center*

Alan W. Cross, M.D., *Director, Health Promotion/Disease Prevention*

Gordon H. DeFriese, Ph.D., *Director, Cecil G. Sheps Center for Health Services Research*

Carol Jenkins, M.L.S., *Director, Health Sciences Library*

Carolyn M. Mayo, Ph.D., *Director, North Carolina Health Careers Access Program*

Ronald R. Rindfuss, Ph.D., *Director, Carolina Population*

Harold Gene Wallace, M.Div., *Vice-Chancellor, University Affairs*

Archie N. Ervin, M.A., *Assistant to the Vice-Chancellor*

Raymond E. Strong, A.B., *Special Assistant to the Vice-Chancellor*

H. Garland Hershey, D.D.S., M.S., *Acting Provost*[17]

William H. Graves, Ph.D., *Acting Vice-Chancellor for Academic Affairs*[18]

Richard L. McCormick, Ph.D., *Provost and Vice-Chancellor for Academic Affairs*[19]

Carl W. Smith, M.S. Comm., *Assistant to the Provost and the Vice-Chancellor, Academic Affairs*

Patricia Lewis Poteat, Ph.D., *Associate Vice-Chancellor for Academic Affairs*

William H. Graves, Ph.D., *Associate Provost, Information Technology*

Anne S. Parker, A.B., *Director, Planning*

William E. Groves, Ph.D., *Director, Computing Services*

Kathryn Conway, M.A., *Director, Instructional Technologies*

James P. Gogan, B.A., *Director, Networking Systems*

John L. Oberlin, M.B.A., *Director, Finance and Planning*

Carol Reuss, Ph.D., *Associate Provost, Educational and Support Services*

Charles W. Millard III, Ph.D., *Director, Ackland Art Museum*

Joel Schwartz, Ph.D., *Director, Center for Teaching and Learning*

Thomas L. McKeon, Ed.D., *Director, Division of Continuing Education; Director, The William and Ida Friday Continuing Education Center*

B. J. Campbell, Ph.D., *Director, Highway Safety Research Center*

Lee T. Shapiro, Ph.D., *Director, Morehead Planetarium*

Peter White, Ph.D., *Director, North Carolina Botanical Garden*

James L. Murphy, Ph.D., *Dean, Summer School*

James C. Walters, Ed.D., *Director, Undergraduate Admissions*[20]

James C. Walters, Ed.D., *Associate Provost and Director, Undergraduate Admissions*[21]

Timothy Sanford, Ph.D., *Interim Special Assistant to the Provost*[22]

Timothy Sanford, Ph.D., *Assistant Provost*[23]

Eleanor S. Morris, A.B., *Director, Office of Scholarships and Student Aid*

David C. Lanier, M.S., *Registrar*

Timothy R. Sanford, Ph.D., *Director, Institutional Research*

Susan N. Friel, Ph.D., *Director, Mathematics and Science Education Network*

Scott Daugherty, J.D., *Executive Director, Small Business and Technology Development Center*

Stephen S. Birdsall, Ph.D., *Interim Dean, College of Arts and Sciences and the General College*[24]

Stephen S. Birdsall, Ph.D., *Dean, College of Arts and Sciences*[25]

Stephen S. Birdsall, Ph.D., *Senior Associate Dean for Plans and Programs*[26]

P. Geoffrey Feiss, Ph. D., *Senior Associate Dean for Plans and Programs*[27]

M. Richard Cramer, Ph.D., *Associate Dean, Arts and Sciences*

Darryl Gless, Ph.D., *Associate Dean for General Education*

Donald C. Jicha, Ph.D., *Associate Dean, General College*

Rosalind Fuse-Hall, J.D., *Associate Dean, Student Counseling*

Robert C. Allen, Ph.D., *Associate Dean, Honors*

Roberta A. Owen, M.F.A., *Acting Associate Dean, Academic Services*

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Footnotes:
[1] Effective 1 July 1992
[2] Retired 31 May 1992
[3] Effective 1 July 1992
[4] Effective 30 March 1992
[5] Resigned 30 June 1992
[6] Effective 30 December 1991
[7] Effective 20 January 1992
[8] Until 19 January 1992
[9] Resigned 2 July 1992
[10] Resigned 19 January 1992
[11] Resigned 17 August 1990
[12] Effective 20 August 1990 - 8 May 1992
[13] Effective 9 May 1992
[14] Resigned 30 June 1992
[15] Effective 10 August 1992
[16] Resigned 31 March 1992
[17] Effective 1 April 1992 - 31 May 1992
[18] Effective 1 April 1992 - 31 May 1992
[19] Effective 1 June 1992
[20] Until 30 September 1992
[21] Effective 1 October 1992
[22] Until 30 September 1992
[23] Effective 1 October 1992
[24] Until 30 June 1992
[25] Effective 1 July 1992
[26] Resigned 30 June 1992
[27] Effective 1 July 1992
[28] Resigned 1 August 1992
[29] Resigned 31 August 1992
[30] Effective 1 September 1992
[31] Resigned 30 June 1992
[32] Effective 1 July 1992 - 31 July 1992
[33] Effective 1 August 1992
[34] Resigned 31 August 1992
[35] Effective 1 September 1992
[36] Until 30 April 1992
[37] Effective 1 May 1992
[38] Effective 28 January 1992
[39] Effective 1 June 1992
[40] Resigned 31 December 1991
[41] Effective 1 January 1992 - 31 December 1992
[42] Effective 1 January 1993
[43] Resigned 12 June 1992
[44] Effective 1 June 1992 - 12 June 1992
[45] Effective 13 June 1992
[46] Resigned 12 June 1992
[47] Effective 16 June 1992 - 31 July 1992
[48] Effective 1 August 1992
[49] Resigned 31 July 1992
[50] Resigned 17 July 1992
[51] Effective 17 August 1992
[52] Effective 1 January 1992
[53] Resigned 18 February 1992
[54] Effective 18 February 1992 - 3 May 1992
[55] Effective 4 May 1992
[56] Resigned 30 September 1992
[57] Effective 2 November 1992
[58] Resigned 31 December 1992
[59] Effective 1 January 1993
[60] Resigned 31 December 1992
[61] Resigned 15 April 1992
[62] Effective 13 April 1992
[63] Effective 30 November 1992

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Admissions

The University of North Carolina at Chapel Hill: Admissions Policy*

I. All qualified persons are equally welcome to seek admission to The University of North Carolina at Chapel Hill, and all persons may apply for and accept admission confident that the policy and regular practice of the institution will not discriminate against them on the basis of race, color, religion, sex, or national origin.

II. Projections of the number of students to be admitted and enrolled in any year shall be determined (a) by the capacity of the institution to meet the instructional and other needs of students in the colleges, schools, departments, curricula, or other programs to which applicants seek admission and (b) by enrollment levels approved for budgetary or other appropriate purposes.

III. When at any time the number of qualified applicants for admission exceeds the number of persons who can be admitted and enrolled (as determined by the criteria specified in II above), those to be offered admission shall be selected on the basis of (a) recognition of the institution's special responsibility to residents of North Carolina and (b) the institution's judgment of the applicant's relative qualifications for satisfactory performance in the specific colleges, schools, departments, curricula, or other programs to which the applicants seek admission.

Provided that the criteria set forth hereinafter are met, this policy of competitive admissions shall not prevent the admission of selected applicants (a) who give evidence of possessing special talents for University programs requiring such special talents (b) whose admission is designed to help achieve variety within the total number of students admitted and enrolled, or (c) who seek educational programs not readily available at other institutions.

In seeking variety within the total number of students admitted and enrolled, the University shall affirm its commitment to achieve excellence, to provide for the leadership of the educational, governmental, scientific, business, humanistic, artistic, and professional institutions of the State and nation, and to enrich the lives of all the people of North Carolina.

In the application of this policy of competitive admissions to nonresident students, preference for admission may be given to nonresident applicants who are children of alumni of the institution.

IV. Admission of persons to the specific colleges, schools, curricula, or other programs of the institution shall be governed by the provisions set forth below.

Undergraduate Admissions

Admission of undergraduate students to colleges or schools to pursue programs leading to a baccalaureate degree shall be the responsibility of the Office of Undergraduate Admissions. That Office shall apply policies and procedures which, not inconsistent with policies adopted by the Board of Trustees, are approved by the Advisory Committee on Undergraduate Admissions.

In the application of the provisions set forth in III above, preference for admission shall be given to qualified residents of North Carolina; provided however, that in recognition of the educational and other values accruing to North Carolina students, to the institution, and to the State from participation of nonresident students in the programs of the institution, nonresidents may be admitted in the entering freshman class in numbers likely to result in no more than 18 percent nonresident enrollment in the entering freshman class.

Admission of undergraduates shall be to the freshman class, to other classes by transfer after satisfactory completion of one or more years of acceptable college-level work in some other institution(s) of higher education, or to Continuing Studies. Among applicants seeking admission by transfer, normal administrative practice shall favor applicants for transfer to the junior class.

Admission and enrollment of persons who are candidates for financial aid for which athletic ability is a consideration shall be conditional upon compliance with applicable regulations of the Atlantic Coast Conference, and the National Collegiate Athletic Association.

Admission to the Freshman Class

Admission to and enrollment in the freshman class shall be conditional upon graduation from secondary school with such units of secondary school academic course credit as may be specified by the Office of Undergraduate Admissions; provided, however, that if all other criteria are met, exceptions to the secondary school graduation and course credit requirements may be made by the Office of Undergraduate Admissions in accordance with procedures approved by the Advisory Committee on Undergraduate Admissions.

Criteria employed for determination of each applicant's qualifications for admission shall include (a) satisfactory

evidence of scholastic promise based upon the applicant's previous academic record, recommendations from schools previously attended, scores on selected tests of scholastic aptitude or achievement, and the applicant's predicted grade average for the freshman year as determined by procedures approved by the Advisory Committee on Undergraduate Admissions; and (b) satisfactory evidence of physical and mental well-being sufficient to cope with the demands of University life.

Minimum requirements for admission and enrollment shall be a total score of 800 on the Scholastic Aptitude Test of the College Entrance Examination Board with scores of at least 350 on each of the verbal and quantitative sections thereof and a Predicted Grade Average of 1.6; provided, however, that applicants who do not satisfy these two criteria may, for sufficient reason, be admitted with the approval of the Advisory Committee on Undergraduate Admissions in each individual case.

Admission by Transfer

Admission and enrollment by transfer from another institution shall be conditional upon a satisfactory academic record on work undertaken in all other institutions attended, satisfactory recommendations from institutions previously attended, and eligibility to return to all previously attended institutions of higher education.

Continuing Studies/Admissions

Eligibility for admission to Continuing Studies shall normally be limited to individuals living within commuting distance of Chapel Hill.

Admission to Continuing Studies of an applicant who does not hold a baccalaureate degree or who seeks instruction in courses numbered below 100 shall be the responsibility of the Office of Undergraduate Admissions. Such admissions shall be either (1) for full credit, applicable toward fulfillment of degree requirements, in which case the minimum requirements shall be the same as those for admission to degree programs; or (2) for personal benefit and enjoyment, in which case the applicant may be exempted from the qualitative requirements for admission to degree programs.

Admission to Continuing Studies of an applicant who holds a baccalaureate degree and who seeks instruction in courses numbered 100 or above shall be the responsibility of the Graduate School. Such admissions shall be only for personal benefit and enjoyment, in which case the applicant may be exempted from the qualitative requirements for admission to degree programs.

Graduate School Admissions

With recognition of the institution's special responsibility to residents of North Carolina but without restrictions based on residence status, admission to the Graduate School shall be a selective process with the objective of enrolling from the pool of applicants for each discipline those students who, in the judgment of the institution, are best qualified to pursue graduate degrees in their chosen academic fields. Admission of graduate students shall be the responsibility of the Dean of the Graduate School with the advice and assistance of the Administrative Board of the Graduate School and of the graduate faculties of the departments, schools, and curricula authorized to offer graduate degree programs.

For admission to the Graduate School, the applicant must (1) hold a baccalaureate degree from an accredited college or university in the United States or its equivalent from an institution abroad, (2) must present a strong overall record of academic achievement, (3) must be in good standing in the last-attended institution where graduate work has been or is being taken, and (4) must be admitted as a degree student unless there are exceptional circumstances justifying admission for nondegree study with the approval of the Dean of the Graduate School.

The graduate student enrollment level for each school, department, or curriculum shall be determined for each academic year by the Dean of the Graduate School following consultation with each of the schools, departments, and curricula concerned.

Professional School (Business, Dentistry, Law, Medicine) Admissions

Admission of students to the professional degree (D.D.S., J.D., M.D., M.B.A. and Master of Accounting) programs in the Schools of Business, Dentistry, Law, and Medicine and to nondegree programs in the Schools of the Division of Health Affairs shall be in each of these Schools the responsibility of its established Committee on Admissions which shall apply policies, procedures, and requirements, not inconsistent with the provisions of this policy, adopted by the faculty of the School and approved by the Chancellor or his delegate.

Summer Admissions

1. Admission of applicants to any summer session shall be the responsibility

a. of the Office of Undergraduate Admissions with respect to those who wish to begin in the summer an undergraduate program of study that will continue into the following academic year or that is intended to lead to a baccalaureate degree from The University of North Carolina at Chapel Hill, as well as those undergraduates already enrolled in this institution who wish to return for undergraduate work in the summer;

b. of the Graduate School with respect to those who wish to begin a degree program of graduate study in the summer, as well as those graduate students already enrolled in this institution who wish to return for graduate study in the summer;

c. of the Dean of the Summer School, with respect to those who wish to attend any summer session as visiting students admitted by the Summer School and who fall into neither of the categories above.

2. Admission to The Summer School by the Office of Undergraduate Admissions and by the Graduate School shall be in conformity with the provisions set forth in this policy for other undergraduate and graduate admissions.

3. Admission to the Summer School by the Dean of the Summer School shall be in conformity with policies, procedures, and requirements adopted by the Administrative Board of the Summer School; provided, however, that each such admission shall terminate as of the last day of that summer term and shall include no commitment, stated or implied, for admission of the student to any subsequent semester or session of The University of North Carolina at Chapel Hill.

4. Appeal concerning an individual admission decision may be had only if it is contended that some provision set forth herein has been violated.

Appeals concerning individual admissions decisions shall be lodged with the administrative officer (the Director of Undergraduate Admissions, the Dean of the Graduate School, the Dean of the professional school concerned, or the Dean of the Summer School) whose office had responsibility for the admission. Thereafter appeals shall be to the Board of Trustees. Each appeal to the Board of Trustees shall be lodged with the Chancellor who shall transmit it, with the advice of the Chancellor, to the Chairman of the Board of Trustees.

*This policy adopted by Resolution of the Board of Trustees on September 3, 1976.

*Amended by Board of Trustees, August 24, 1984.

*Amended by Board of Governors, March 14, 1986.

Undergraduate Admissions

The Office of Undergraduate Admissions will assist in any way possible students interested in continuing their education at The University of North Carolina at Chapel Hill. Applications from nonresidents are encouraged, but, because of quota limitations, nonresidents must have particularly outstanding qualifications in order to be competitive.

Admission Requirements

The admissions process at The University of North Carolina at Chapel Hill is necessarily a selective one. A student's high school record (course difficulty and performance) and test scores are important elements in admissions decisions, but other accomplishments and personal qualities are also relevant, since the University seeks a diverse body of students.

By their anticipated date of enrollment, candidates for admission should have reached the age of sixteen and must have graduated from an approved or accredited secondary school. In addition, the University asks that candidates present evidence of physical and mental well-being sufficient to cope with the demands of university life.

Items Necessary for a Complete Application

Freshman Admission

The completed application will include:

A. Official transcript(s) from approved secondary school(s).

B. Official Scholastic Aptitude Test and/or ACT scores.

C. Recommendation from the current school or school last attended. (If the candidate is in a new school for the first time, an additional recommendation from the previous school is suggested.) If the policy of the school forbids subjective recommendations, the University will accept the transcript alone, as long as it is signed by the principal or guidance counselor.

NOTE: Current federal legislation allows students enrolling at the University access to their files. Students do not have access to their applications.

D. Students are encouraged to furnish any information that will enhance the University's understanding of their background and preparation for college.

E. Application fee of $45.00 (nonrefundable).

F. Any additional items or information requested in the application materials or by the Office of Undergraduate Admissions.

Transfer Admission

The completed application will include:

A. Official transcript from each college attended, including summer sessions.

B. Transcript showing high school units (Grades 9 thru 12).

C. Application fee of $45.00 (nonrefundable).

D. Any additional items or information requested in the application materials or by the Office of Undergraduate Admissions.

High School Course Requirements

The University suggests that a student present for admission a strong college preparatory program. Such a program should include honors and advanced placement courses if these courses are available and if the student's enrollment in these courses is academically appropriate. Prospective students also are encouraged to complete as many college preparatory courses as the high school program will allow. THE DIFFICULTY OF COURSES SELECTED BY THE STUDENT WILL BE A FACTOR IN THE ADMISSIONS DECISION.

To be considered for admission a student should present these minimum high school course requirements (including the 9th grade): 4 units of English; at least 3 units of college preparatory mathematics (2 algebra and 1 geometry or a higher level mathematics course for which algebra II is a prerequisite); at least 2 units of a single foreign language; 3 units in science, including at least 1 unit in a life or biological science and at least 1 unit in a physical science, and including at least 1 laboratory course; 2 units of social science including United States history; and enough elective units in traditional academic areas (literature, mathematics, physical and biological sciences, social sciences, and foreign languages) for a total of 16 units. Admitted students will take placement exams in math and foreign language; therefore, it is preferred that students continue in advanced levels of math and foreign language courses during their final year in high school even if they have already met the minimum requirements in these fields.

Placement in courses during students' first semester at the University will be based on their performance on placement tests. Although the student will take placement exams in some subjects at the University before the first semester begins, it is to the student's advantage to take placement tests in high school, especially those accepted by the University for placement purposes. Foreign language

placement may be based on the College Board Achievement and College Board Advanced Placement tests, which are offered by the Educational Testing Service. English placement is based on the College Board Achievement and College Board Advanced Placement tests as well as on CEEB verbal SAT scores. Students also are encouraged to take standardized tests that are recognized for placement in other subject areas.

College Board Placement Tests

The University recognizes for placement and degree credit, satisfactory scores on the College Board Advanced Placement and Achievement Tests, the College-Level Examination Program (CLEP) and Dantes. For more specific information, please contact the Admissions Office.

Information about College Board tests, and applications for specific tests, may be obtained by writing the Educational Testing Service, Box 592, Princeton, NJ 08504 or Box 025, Berkeley, CA 94707. Applicants should apply to take a test six to eight weeks in advance of the actual test date.

Transfer Candidates

Transfer applicants who graduated from high school in 1988 and after must present the following 16 academic units from high school in order to be eligible for admission consideration:

4 years of English;
3 years of mathematics (2 algebra and 1 geometry);
3 years of natural science (1 biological, 1 physical, and at least 1 laboratory course);
2 years of social science (1 must be U.S. history);
2 years of the same foreign language;
2 additional years of academic electives.

For those enrolling in the fall of 1990 and thereafter, transfer applicants deficient in any of the minimum admission requirements will be eligible for transfer consideration only if one of the following conditions is met:

A. 24 transferable semester hours in the following areas:

6 semester hours of acceptable college level English (not to include remedial courses)
6 semester hours of acceptable college level mathematics (not to include remedial courses; college algebra is considered remedial at UNC-Chapel Hill)
6 semester hours of acceptable college level history
6 semester hours of acceptable natural sciences

OR

B. Applicant must hold an Associate of Arts, Associate of Fine Arts, or Associate of Science degree prior to enrollment at UNC-Chapel Hill.

Students who have completed or who will complete two years of college prior to their intended enrollment are encouraged to apply for transfer admission. The University will also accept a small number of sophomore transfer students.

In order to be considered for transfer admission, students must present at least a C average (2.0 on a 4.0 system) in all courses undertaken at other accredited colleges and universities. However, a much higher average is required to be competitive. Students also must be eligible to return to all institutions previously attended. A student who is academically ineligible for consideration as a transfer student may count course work completed through the Independent Study by Extension program toward establishing eligibility to transfer to the University. However, course work completed in The University of North Carolina at Chapel Hill Summer School cannot be used to establish eligibility to be considered as a transfer applicant.

Once admitted as a transfer student, any course credits received at UNC-Chapel Hill in a prior summer session become part of the official transcript of the student and grades received are included in the grade point average. Due to space limitations, the University usually cannot admit all the students who meet minimum standards.

Transfer candidates are categorized by class, based on the acceptability of their transfer credit and on the number of college terms in residence (one term in residence is the equivalent of one term of full-time enrollment). The categories are: one term and less than 24 semester hours of transfer credit for freshmen; 2 or 3 terms and 24 to 50 semester hours for sophomore standing; 3, 4, or 5 terms and 51 to 84 semester hours for junior standing; and 6 terms or more and 84 or more semester hours for senior standing. Students presenting more than 84 semester hours should realize that we give priority to junior transfers. Transfers with less than junior standing must meet both freshman and transfer eligibility requirements.

Transfer of Credit

The University will transfer, for degree credit, courses from other accredited institutions when the student has made a satisfactory grade (usually a C or its equivalent) and when a similar course is offered by the University. Students should expect difficulty in transferring professional course work. Course work from nonaccredited institutions (including foreign institutions) must be approved through departments at this University. Transfer credit for having fulfilled certain course requirements is granted for the lowest passing grade, but credit hours for the lowest passing grade will not be transferred. Hours will not be withheld for courses in which a grade of "C - " (C minus) is earned; however, the student's dean will determine if the course(s) may be applied towards the degree.

The University will consult two publications when settling questions that arise concerning the transfer of credit: *Transfer Credit Practices*, published by the American

Association of Collegiate Registrars and Admissions Officers, and *Accredited Institutions of Post-Secondary Education*, published by the American Council on Education.

A student who feels qualified may challenge any University course by asking to be examined on the material taught in the course. A passing grade on this validating examination will earn degree credit.

Students seeking transfer to the University will wish to plan their courses at their current institution in a way which will ensure the transfer of their course work. The University encourages such prior course planning, and the Office of Undergraduate Admissions will assist prospective transfer students with it.

The University will accept a maximum of sixty-four semester hours of transfer credit from a two-year institution or from a combination of two- and four-year college enrollment when the four-year college enrollment precedes the two-year college enrollment. However, students who have sixty-four semester hours of college credit cannot transfer additional credit from a two-year institution. Physical education courses taken at another institution will count toward the University's physical education requirement but not for degree credit.

Transfer students must satisfy the freshman entrance requirements of this University, even where these differ from the requirements of the previous institution attended. For information on language requirements for transfer students, see the General Education Requirements section.

When to Apply

Candidates for the fall semester are encouraged to apply one year before the fall in which they intend to enroll. January 15 is the effective deadline; applications received by that date are given first consideration and usually fill the class. If space is available in the class, applications received up to March 1 will be considered. Out-of-state candidates should be aware that after the deadline particular priority will be given to North Carolina residents and to children of alumni.

The University does not consider new students for spring enrollment.

The University will consider any candidate at any time, provided that places in the incoming class are still available.

Freshman Applications. The application deadline for the fall semester is January 15. All materials except first term grades and senior SAT and/or ACT results must be received by this date or the student will be considered a late applicant and placed on the waiting list.

Notification

For freshman applicants: if your application is complete and in the Office of Undergraduate Admissions by October 15, letters explaining whether you have been accepted for admission, deferred until a later date, or not accepted will be mailed to you during the first week of December; if application is complete by November 15, your letters will be mailed during the first week of February; if the application is complete after November 15, notification will be by April 15.

Transfer Applications

Transfer students will be notified beginning in January after receipt of fall term grades.

Priority in transfer admissions is extended to students who have completed two full academic years of course work (with 51 transferable academic semester hours) prior to their proposed entrance date. Courses completed in summer (immediately prior to fall enrollment) are not used in determining junior standing. The University does not recommend transferring after three years of college work, since at least half of the major courses, and the last 45 hours toward the degree, are required to be taken in residence.

The entire application should be returned to the Admissions Office as soon as possible after the beginning of the fall semester. All applications for fall semester should be submitted before January 15.

Programs with Limited Admissions

Prospective transfer students are advised that only a small number of transfer students will be admitted in the majors of Business Administration, Journalism and Mass Communication, Education, and the Allied Health Programs. Students interested in one of these fields may wish to consider another major as a second choice; however, even if admitted to an alternate program students cannot be guaranteed subsequent admission to their first choice of major. In addition, notification of acceptance to these programs is generally later than for other programs.

Health Program Majors

Applicants for any of these programs must apply by December 1 for the fall semester. After completion of the fall semester a transcript of that semester's work should be sent. They should also contact the specific department for additional application materials.

The bachelor degree in Physical Therapy has been discontinued. A new entry-level master's degree has been created.

Applicants for the Pharmacy program must submit Pharmacy College Admission Test scores.

Education Majors

Transfer students should take the Communication Skills and General Knowledge tests of NTE before the end of the sophomore year, preferably in the fall of that year. Official scores on these exams should be sent with the application if possible, or soon thereafter. Some provisional admissions may be made pending receipt of scores.

Music or Dramatic Art Majors

Students applying as music majors should contact the Director of Undergraduate Studies in Music at 101 Hill Hall to arrange an audition. (Please indicate whether you wish to study voice or an instrument; if an instrument, please indicate which one.) Students applying to major in the dramatic arts should contact the Director of Undergraduate Studies in Dramatic Arts at 105 Graham Memorial.

Fall/Winter Grades

The fall and winter grades should be mailed to the University as soon as they become available. Any application will be considered incomplete without them and will not be reviewed until they arrive.

Confirmation of Acceptance

The University requires a nonrefundable $100.00 enrollment/housing deposit. This is due by May 1 for fall admission, or, for students admitted after the deadline or for the spring term, it is due within two weeks of receipt of the letter of admission.

Degree candidates starting in summer school who intend to continue in the fall must pay their summer fees as well as the fall term deposits in order to reserve a space for the fall term.

Admission of International Students

International students are considered for admission on the same basis as native candidates. An international student should present College Board Scholastic Aptitude Test results as well as transcripts from previous schooling. International students should also submit results on the Test of English as a Foreign Language (TOEFL) in support of their application.

Before admission, applicants must provide documentation attesting that they have on deposit funds sufficient to pay total expenses at the University for one year. See the Financial Aid section for information on expenses. The University will issue the necessary visa documentation to those students who are formally admitted to the University. International students should not leave their native country intending to enroll at the University until they have received a formal letter of acceptance and appropriate visa documents.

Questions concerning international student life on the UNC- Chapel Hill campus should be referred to the **Foreign Student Adviser, Carolina Union, CB# 5240, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-5240.**

Readmissions

Any student who withdraws or for any other reason fails to complete a semester must apply for readmission through the Office of Undergraduate Admissions. Students applying in this manner must pay a nonrefundable $45 application fee. Application for readmission should be made as early as possible and in no case later than 2 weeks before the opening of the semester.

A student leaving the University with an academic deficiency must restore his or her eligibility in order to be readmitted as a regular student. Restoration of eligibility can be accomplished only by enrolling in summer sessions or through correspondence instruction from the University (see below).

Students who have enrolled in course work at another college or university since their last enrollment at The University of North Carolina at Chapel Hill must submit transcripts of this course work and must have maintained a C average for all such course work attempted in order to be eligible for readmission. The grade point average (GPA) required for eligibility is based on all semesters in residence on all campuses.

Students leaving the University for medical or disciplinary reasons must be cleared by the appropriate office before being readmitted.

The University must adhere to enrollment projections; therefore readmission is not guaranteed even if the student is academically eligible.

Admission As a Summer School Visitor

Any student who has not been regularly enrolled or has not been admitted for the fall semester in any school in the University should send his/her application for admission as a visiting summer student to the **Dean of Summer School, CB# 3340, Pettigrew Hall**. Those students who are in residence at the University will preregister or register for a summer session through their academic dean or adviser, and need not make a separate application to the Dean of Summer School. A student who plans to restore academic eligibility through work done in a summer session must apply to the **Director of Undergraduate Admissions, CB# 2200, Jackson Hall.**

Further Information

For additional information and services related to the admission of freshmen and transfer students, contact the **Director of Undergraduate Admissions, CB# 2200, Jackson Hall, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-2200.**

Intra-University Transfer

Transfer from one school or college within the University is possible with the approval of both academic deans concerned.

Admission to Other Credit Programs: Independent Studies

(Correspondence Instruction)

In addition to the courses listed in this Bulletin, many undergraduate courses are available through independent studies (correspondence instruction). The independent studies program allows students to enroll at any time, to work at their own pace, and to take up to thirteen months to complete a course.

Application for independent studies courses is made to the **Office of Independent Studies, Friday Center, CB# 1020** (telephone (919) 962-1105). Application forms and a complete catalog of course listings may be obtained from the same office.

A student may earn thirty semester hours of credit toward a degree at The University of North Carolina at Chapel Hill through independent studies courses. Students found academically ineligible to continue in resident study at the University may restore their eligibility through independent studies courses. Students attending classes may not enroll in an independent studies course at the same time without the written consent of their deans.

Admission to Continuing Studies

Continuing Studies is the academic unit through which area adults enroll in University courses to achieve the intellectual and professional growth needed by citizens of an increasingly complex society. Both undergraduate and postbaccalaureate students are admitted without respect to race, color, national origin, religion, sex, age, or handicap.

Continuing Studies students may register for a maximum course load of eight credit hours per semester. A selection of undergraduate courses is scheduled for the evening hours; the University's daytime courses are also open to Continuing Studies students if space permits.

Undergraduates desiring to enroll through Continuing Studies should file an admission application and nonrefundable $45 application fee with the **Office of Undergraduate Admissions, CB# 2200, Jackson Hall, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-2200.** Admission is limited; preference is given to students who have been away from a traditional school setting for at least one year and to UNC-Chapel Hill faculty/staff employees. Traditional students who have been denied full-time admission to the University are not admitted to Continuing Studies. All students admitted as prospective degree candidates must meet minimum University requirements for admission.

Students who have a baccalaureate degree should file for admission directly with **Continuing Studies, CB# 1020, Friday Center, Chapel Hill, NC 27599-1020.**

Applications for admission must be received at least thirty days prior to the beginning of the semester in which the applicant wishes to enroll. Specific application deadlines may be obtained from the Admissions Office.

Admission to Continuing Studies does not constitute admission to a degree program at the University. Undergraduates must be accepted for transfer into one of the degree-granting schools or colleges of the University. A minimum of 45 hours of academic credit must be taken at UNC-Chapel Hill, with at least 24 of the last 30 hours being taken on the UNC-Chapel Hill campus. Postbaccalaureate students must apply and be accepted to a graduate degree program.

Continuing Studies students who have not registered for a semester or more should inquire about readmission at least thirty days prior to the start of the term of their return.

Orientation and New Student Registration

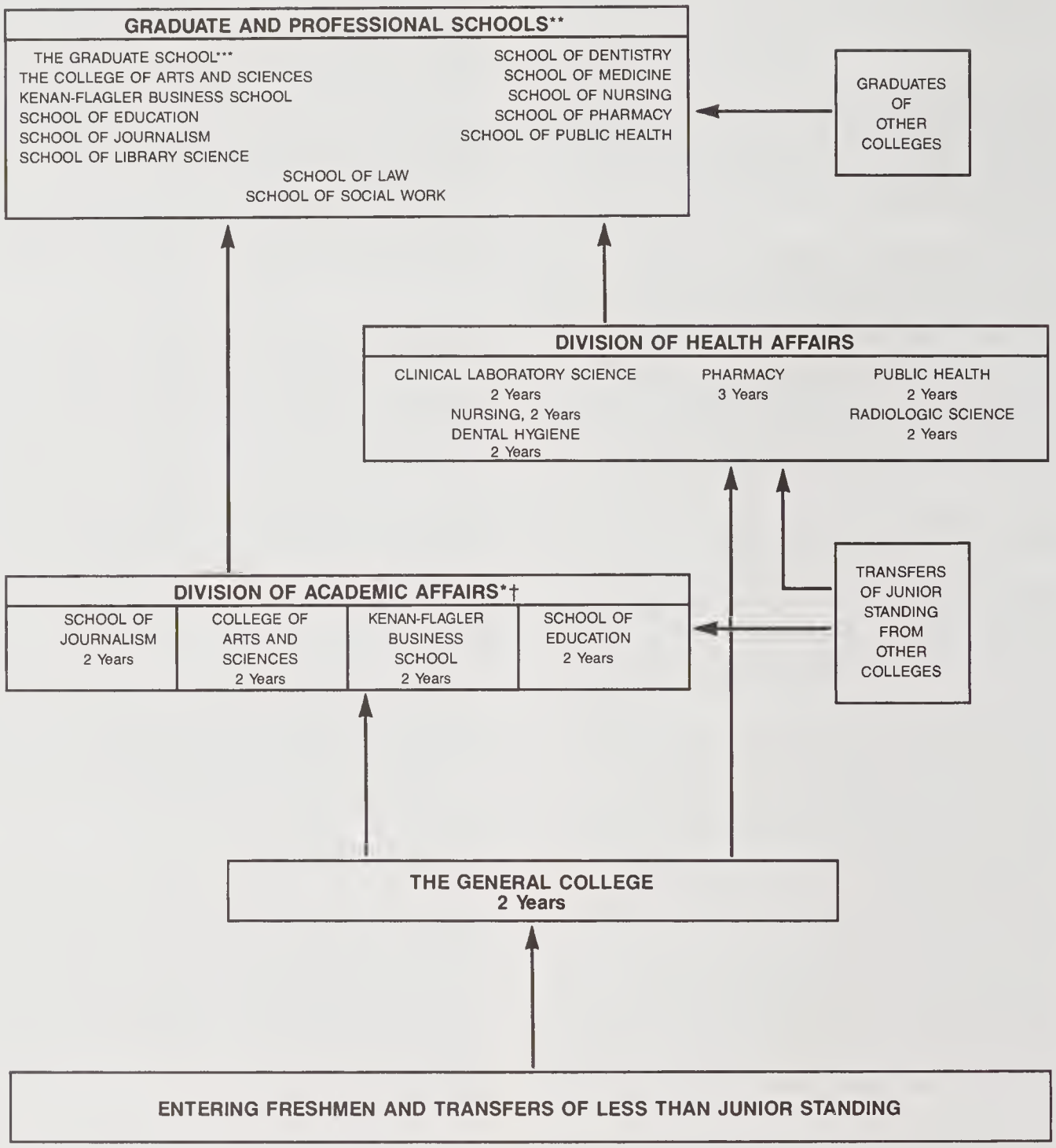
In June prior to their first semester in residence, freshmen will receive from the General College an academic self-advising manual and other academic materials. Each student is asked to respond to the information supplied in the manual by completing a worksheet and returning it to the General College. Upon receipt of the completed worksheets, the General College advisers prepare fall semester registrations for the incoming freshman class. Transfer students who will be entering an upper college follow a similar routine.

During the summer preceding their first semester in residence at the University, freshmen and their parents are invited to participate in one of several Testing and Orientation Program Sessions (TOPS). TOPS days provide foreign language and mathematics testing for proper course registration in the fall.

In addition, they offer a wide range of programs intended to introduce new students and their parents to Chapel Hill, to acquaint them with the academic opportunities available to undergraduates, to aid them in the adjustment to campus living, and to offer other information, discussion, and academic advice. New student orientation continues when the students arrive in the fall for registration and classes.

Academic Organization and Undergraduate Requirements

Academic Flow Chart



**Admission may be granted if the student meets the requirements of and is accepted by the individual school.

***Admission for all postbaccalaureate programs (except the J.D., M.D., D.D.S., M.B.A., and Master of Accounting degrees) is through the Graduate School.

*The junior and senior years of the Medical Technology, Physical Therapy and Radiologic Science curricula are administered by the School of Medicine.

†The junior and senior years of Public Health are administered by the School of Public Health.

General Education Requirements and Requirements for the Major

Undergraduates at the University must fulfill the General Education requirements common to most fields of study and the more specialized requirements of their major field. The General Education requirements fall under two headings: Basic Skills (English composition, foreign languages, and mathematical sciences) and Perspectives (Aesthetic, Natural Sciences, Philosophical, Social Sciences, and Western Historical/Non- Western/ Comparative).

The faculty believe that General Education rests upon the knowledge and practice of the Basic Skills. These include the ability to:

- write clearly,
- read critically,
- speak effectively,
- comprehend a foreign language,
- use mathematics,
- reason analytically,
- understand abstract ideas.

To impart and polish these basic skills, the curriculum requires training in English composition, a foreign language, and mathematical sciences.

The five Perspectives requirements build upon students' knowledge of the Basic Skills and ask them to learn both the content and the methodologies of several disciplines. Students must take courses in the Aesthetic Perspective (literature and the fine arts), the Natural Sciences Perspective, the Philosophical Perspective, the Social Sciences Perspective, and the Western Historical/Non-Western/ Comparative Perspective.

These Basic Skills and Perspectives requirements make up the core of the General Education curriculum. The Basic Skills requirements (four to five courses) apply to all students. The Perspectives requirements fall into two categories: nine courses are required of all freshmen and sophomores by the General College. Four more courses, selected from four of the five perspective areas, are required of juniors and seniors pursuing the degree of Bachelor of Arts in the College of Arts and Sciences. These requirements are detailed in the following sections.

Basic Skills

Writing Policy

The faculty of the General College and the College of Arts and Sciences expects students to write effectively. Instructors should help students realize that there is a direct relationship between thinking clearly and writing clearly. Faculty in all disciplines and professions should therefore require their students to write well. Students should expect to be graded on spelling, grammar, and style, as well as on the content and organization of their written work.

Students who wish to improve their writing can make appointments with a tutor in the Writing Center. This free, noncredit service is available toany member of the University community. Faculty members who identify weak writers should refer them to the Writing Center as early as possible in the semester in order to insure maximum benefit from tutorial instruction. In cases that seem especially severe, faculty may recommend that a student attend tutorials at the Writing Center as a requirement for passing the course.

English Composition

All students at the University must pass English 11 and English 12. These courses develop the skills of writing, reasoning, and argumentation, which are necessary to the entire educational endeavor. Students may prepare for these courses while in high school by taking courses in English composition and literature beyond the four years of English required for admission to the University. Students who have had such preparation usually perform better in their classes than those who have not.

Placement in English composition is determined by the student's score on the Verbal SAT, the College Board Achievement Test, or the Advanced Placement Test in composition. Those who feel their test scores do not accurately reflect their writing ability may take a Writing Sample test offered by the English Department. If placement scores or writing samples indicate a need for instruction and practice in preparation for English 11, students will pass the developmental course English 10 before taking English 11.

Regardless of placement, continuous enrollment is required until the series of English Composition courses is completed. Any student whose native language is not English will be required to pass English 11 - 12 like other students. However, that student will be permitted to waive, without credit, the foreign language requirement up to or through level 4. An authorized representative of the appropriate University department must confirm the student's proficiency in the language up to that level in order for the waiver to be granted.

Foreign Languages

The study of a foreign language enables students to see more clearly the nature and structure of their own language while gaining an understanding of a foreign culture.

Students should improve their language preparation by continuing their foreign language study through the senior year of high school. It is preferable that they complete four years of one high school language rather than, for example, taking two years each of two different languages.

Placement in a foreign language is determined by the student's score on the College Board Achievement Test, the Advanced Placement Test in a foreign language (taken at the completion of language study in high school), or the appropriate placement test administered by the University during freshman orientation.

All first-year students entering the University after May 15, 1990, must meet the new foreign language requirements described below in order to fulfill the General Education Basic Skills requirement in the General College. These same requirements apply to sophomore transfers admitted after May 1, 1991, and to junior transfers admitted after May 1, 1992.

Students admitted to the University before the aforementioned dates should consult their academic dean about their foreign language requirements and the application of transfer credit for foreign language courses taken at another college or university toward the fulfillment of their foreign language requirement.

In the following statements, "high school foreign language" is defined as completion of two or more years of courses in the same high school foreign language.

Students whose foreign language placement is below level 4 of their high school foreign language and who wish to continue in this language must complete through level 3. Credit hours toward the 120-academic hour graduation requirement are not awarded for level 1, if students place into level 1. Grades earned in level 1 courses, however, are computed in the students' grade point average and are used in all academic eligibility and academic load considerations.

Students who enroll in a foreign language other than their high school foreign language are required to complete through level 3. In this case, credit hours towards fulfilling the 120-academic hour graduation requirement are awarded for successful completion of level 1.

Students whose placement is level 4 of their high school foreign language and who wish to continue in that language must complete through level 4. Placement credit is awarded for level 3 upon successful completion of level 4. Students whose placement is beyond level 4 of their high school language have fulfilled the foreign language requirement and are awarded placement credit for levels 3 and 4.

Some undergraduate degree programs require the completion of foreign language courses beyond that needed to fulfill the General Education Basic Skills requirement. Academic advisers will inform students if their degree programs require completion of additional foreign language courses.

The courses listed below may be used to satisfy the foreign language requirements:

Arabic 101, 102, 103, 104
Chinese 1, 2, 3, 4
Czech 101, 102, 103, 104
French 1, 2, 3, 4
German 1, 2, 3, 4
Greek 1, 2, 3, 4
Italian 1, 2, 3, 4
Japanese 101, 102, 103, 104
Latin 1, 2, 3, 4
Polish 101, 102, 103, 104
Portuguese 1, 2, 3, 4
Religious Studies (Hebrew) 113, 114, 115, 116
Romanian 101, 102
Russian 1, 2, 3, 4
Serbo-Croatian 101, 102, 103, 104
Slavic 107, 108
Spanish 1, 2, 3, 4

Mathematical Sciences

Through the study of mathematics students reinforce or acquire the ability to reason and to use analytic and quantitative ideas in both theoretical and applied contexts. In today's world of fast-paced scientific and technological advances, the importance of such skills cannot be overstated.

Students should prepare by taking precalculus and/or calculus in high school and by continuing their mathematical studies up through their senior year of high school. Not to do so may put them at a disadvantage in the University.

Placement in the mathematical sciences will be determined by scores on the College Board Achievement Test (Level I or II), the Advanced Placement Test (AB or BC), or a placement test given during Freshman Orientation. Students whose placement scores indicate a weakness in basic algebra skills may take Math R, a review course in high school algebra. Math R carries three credit hours for purposes of determining a student's GPA, eligibility, or financial aid status, but does not count toward the 120 academic hours required for graduation.

All first-year students entering the University after May 15, 1990, must meet the new mathematical sciences requirements described below in order to fulfill the General Education Basic Skills requirement in the General College. These same requirements apply to sophomore transfers admitted after May 1, 1991, and to junior transfers admitted after May 1, 1992.

Students admitted to the University before the aforementioned dates should consult their academic dean about their mathematical sciences requirements and the application of transfer credit for mathematical sciences courses taken at another college or university toward the fulfillment of this requirement.

Students who place into Mathematics 10 (Algebra) are required to complete Mathematics 10 and one additional course selected from the approved mathematical sciences course list. Students who place above Mathematics 10 are exempted from this course requirement and are required to

complete one course selected from the approved mathematical sciences course list. Placement hours are not awarded for exempting Mathematics 10.

Some undergraduate degree programs require completion of specific mathematical sciences courses beyond those needed to fulfill the General Education Basic Skills requirement. Academic advisers will inform students if their degree programs require completion of additional mathematical sciences courses.

Exemption from Mathematics 10 or successful completion of this course is a prerequisite for enrolling in any course on the approved mathematical sciences course list given below. Placement scores that allow students to exempt Mathematics 10 may initially exclude these students from some of these courses.

The Basic Course list provides courses that do not require a specific prerequisite (first group of courses). However, some students may be advised to complete Mathematics 10 before proceeding to Mathematics 30 or complete Mathematics 30 before proceeding to Mathematics 31. If the equivalent of Mathematics 10 is completed at another institution with at least a grade of C, exemption from the Mathematics 10 requirement is granted. However, no transfer credit hours toward fulfilling graduation requirements are awarded for the successful completion of this course. Additionally, transfer credit for any mathematical sciences course on the Basic Course list (for which Mathematics 10 is a prerequisite) exempts a student from the Mathematics 10 requirement. On the other hand, students with advanced placement, exceptional ability, or superior performance may select a course from the second list (Courses with Prerequisites) consisting of courses that have been one of the basic courses as a prerequisite.

Basic Courses

General interest math courses: - Mathematics 16, 17, 18
Precalculus: - Mathematics 30
Calculus for business/social sciences applications: - Mathematics 22
Calculus for natural/mathematical sciences: - Mathematics 31
Computer programming: - Computer Science 14, 15
Statistics: - Statistics 11
Logic: - Philosophy 21, 71

Courses with Prerequisites

Prerequisite	Courses
Mathematics 22	Statistics 23, OR 40
Mathematics 31	Mathematics 32
Statistics 11	Statistics 14
Mathematics 32	Mathematics 33
Mathematics 32	Mathematics 81
Mathematics 33	Mathematics 83
Mathematics 33	Mathematics 85

Perspectives

Aesthetic Perspective

Two courses are required in order to fulfill the Aesthetic Perspective: one in literature and one in the fine arts. The purpose of this requirement is to enable students to explore the varieties of artistic creation and to realize how the full range of human experience is given expression in the arts.

Fine Arts

ART 1, 2, 30, 31, 31A, 32, 32A, 33, 34, 35, 36, 37, 38, 43, 64 (=WMST 64)
DRAM 15, 16, 20
ENGL 42 (=RTVM 42)
GERM 68
HNRS 27, 40
MUSC 21, 31, 40, 42, 45, 46
PHYE 93
RTVM 26, 42 (=ENGL 42)
WMST 64 (=ART 64)

Literature

AMST 34H, 35H
CLAS 29, 30 (=CMPL 30), 31, 33, 35, 36, 61, 62, 77
CMPL 21, 22, 30 (=CLAS 30)
ENGL 20, 21, 22, 23, 23W, 24, 25, 25W, 26, 28, 29, 29W
FREN 21
GERM 21, 29, 40, 41
GREEK 21
HNRS 28, 41
ITAL 40, 41, 42
LATN 21
PORT 35, 40
RELI 55, 82
ROML 29
RUSS 50, 70, 74
SLAV 29
SPAN 21, 35, 40, 46
SPCH 41

Natural Sciences Perspective

Two courses are required for the Natural Sciences Perspective. At least one of these must include a lecture course with a complementary laboratory (i.e., Chemistry 11 and 11L, Biology 11 and 11L, or Astronomy 31 and 31L, etc.). It is important for students in today's technologically complex world to develop an understanding of the methodology and some of the content of the sciences. Those students who have exceeded their minimum high school science requirement are at an advantage in the University's science courses.

Basic Courses

Required Lab

BIOC 7, 8
BIOL 41, 43, 47, 52, 53, 54
CHEM 11 & 11L, 21 & 21L, 25H & 25L
GEOL 41, 42 & 42L
PHYS 20, 24 & 24L, 25 & 25L, 26, 27, 28 & 28L

Optional Lab

ASTR 31 & 31L
BIOL 11 & 11L, 45 & 63L, 62 & 62L, 63 & 63L, 72 & 72L, 73 & 73L, 80 & 80L
GEOL 11 & 11L, 16 & 16L

Without Lab
ASTR 32, 33
BIOL 8, 10, 55, 78
ENVR 51
GEOG 10, 11
GEOL 12, 15, 46, 48
HNRS 29, 47
PHYE 76
PHYS 21, 36, 38
PSYC 10

Philosophical Perspective

One course is required to fulfill the Philosophical Perspective. Students will investigate moral and ethical issues, and develop the ability to arrive at reasoned viewpoints.

AMST 34H, 35H
ANTH 46
COMP 96
ECON 59
HNRS 32, 46
PHIL 20, 22, 24, 31, 32 (=RELI 32), 33, 34, 35, 37, 38
POLI 61, 62, 63, 64
RELI 21, 22, 30, 31, 32 (=PHIL 32), 35, 36, 37, 58, 68
SOCI 50
SPCH 62 (=PWAD 60)

Social Sciences Perspective

Two courses from different departments are required to satisfy the Social Sciences Perspective. The courses study social institutions and social evolution. The methodology of the social sciences is an important element of this Perspective requirement.

ANTH 40 (=FOLK 40), 41, 43, 44, 45, 49
CLAS 26
ECON 10
FOLK 40 (=ANTH 40)
GEOG 20, 21, 22, 23, 30
HNRS 30, 45
LING 30
PHIL 36
PHYS 37
POLI 41, 42, 52, 66, 69, 70, 75, 86 (=PWAD 86)
RTVM 20
SOCI 10, 12, 15, 20, 22, 23, 30, 31, 33
SPCH 21, 51, 67
WMST 50

Western Historical/Non-Western/Comparative Perspective

Two courses are required. One must cover a period of Western history before 1700. The other may be another Western history course, spanning at least two centuries if the first course did not, or it may be a Non-Western or comparative course. Students will choose at least one course from the first column below and may choose the other from any column below. The purpose of the requirement is to develop in students an appreciation of the cultural heritage of the Western world. By studying a Non-Western culture, or comparing Western and Non-Western cultures, students broaden their understanding of their own culture and of the world.

Pre-1700 Western History (All courses span 2 centuries)
AFAM 40
CLAR 40, 41, 42
CLAS 20, 21, 34, 44
HIST 5H, 11, 14, 15, 27, 52, 53, 56
HNRS 31, 43
RELI 24, 27, 56, 59

Other Western History
AFAM 41
AMST 20, 34H, 35H, 40
ECON 36
HIST 6H, 7H, 8H, 12, 16, 17, 21, 22, 28, 31, 59 (=WMST 59), 63 (=PWAD 63)
HNRS 31, 42
PWAD 63 (=HIST 63)
RELI 29, 71, 72
SPCH 63
WMST 59 (=HIST 59)

Non-Western/Comparative
AFRI 40, 66
ANTH 20, 26, 30, 36, 42, 50, 55
CHIN 50, 51
CLAR 45, 46
ECON 67
HIST 4H, 18, 18H, 24, 25, 30, 33, 34, 36 (=RELI 25), 37 (=RELI 26), 38, 39, 77, 78, 79
HNRS 31, 44
POLI 54, 56, 59, 60, 85
RELI 10, 20, 25 (=HIST 36), 26 (=HIST 37), 39, 40
SOCI 11

Honors Seminars

Honors Seminars are offered in all the Perspectives; these are available to students in the Honors program and to others by permission. They may be used to complete the Perspectives requirements. Details are available through the Honors Office.

Qualified students are permitted to fulfill some General College requirements with courses chosen from the lists of upper-level requirements.

Physical Education Requirement

All students must pass a swimming test and complete two physical education activities courses. These are one hour each and are not counted toward the graduation requirement of 120 academic hours.

General Education: Juniors and Seniors

During their junior and senior years, students seeking the Bachelor of Arts degree must complete General Education requirements by passing upper-level perspective coursework in four of the five perspective areas. Students who choose two Western historical courses to fulfill their

General College historical perspective requirements must take an upper-level Non-Western/comparative course as one of their four upper-level perspectives. These courses may not be taken pass/fail. None of the courses may be in the student's major (or second major), unless it is a capstone course. Courses in the minor departments may not be used to satisfy Arts and Sciences perspective requirements.

The faculty approved these requirements for all B.A. degree candidates because they believe that juniors and seniors benefit from further study in the Perspectives and because the additional courses add coherence and depth to the General Education requirements. To this end, students are encouraged to pursue courses in sequence as they fulfill their requirements.

For example, a student might take Classics 33 (The Age of Pericles) as an introduction to the literature, art, and thought of classical Greek civilization, and continue with Classics 62, The Tragic Dimension in Classical Literature, a more specialized course. Or, a student might take introductory physics and calculus courses in the General College and then specialized courses in electronics in the junior or senior year.

Capstone Courses

Capstone courses particularly stress one or more of the following: the presuppositions of a discipline and how they determine the way it is studied; the intersection of interests between two or more disciplines; and the ethical implications of the ways in which knowledge is applied. Capstone courses are not required for graduation, but students are encouraged strongly to satisfy one or more of their four upper-level Perspective requirements with capstone courses. The courses on the preceding lists which are marked with asterisks have been designated as capstone courses.

Aesthetic Perspective

AFAM 94A*
AFRI 62, 64
AMST 34H, 35H, 63
ANTH 134 (=FOLK 134 =ART 134), 189, 196
ART 1, 2, 15, 16A, 17A, 17B, 17C, 30, 33, 35, 36, 37, 38, 43, 51 (=CLAR 51), 52, 56, 57, 58, 62, 70, 71, 74, 77 (=CLAR 77), 148 (=CLAS 148), 149A (=CLAS 149A), 149B (=CLAS 149B), 151 (=WMST 151), 190 (=CLAR 190), 191 (=CLAR 191)
CHIN 112, 113, 133, 134
CLAR 51 (=ART 51), 77 (=ART 77), 96, 190 (=ART 190), - 191 (=ART 191)
CLAS 61, 62, 64, 148 (=ART 148), 149A (=ART 149A), 149B - (=ART 149B)
CMPL 90, 93, 96 (=WMST 96), 170, 171, 172, 173, 174
DRAM 81, 82, 83, 84, 86, 150, 155, 166, 167, 177
ENGL 34, 34P, 35, 35P, 42 (=RTVM 42), 43, 45, 46A, 46B, 47W, 51, 52, 54, 58, 59, 60, 63, 64, 65, 66, 72, 73, 78, 80, 81, 82, 83, 84, 85, 86 (=WMST 86), 87 (=WMST 87), 88, 89, 90, 91, 92, 93, 94D,* E,* I,* 95, 146 (=FOLK 146), 147 (=FOLK 147), 153 (=FOLK 153), 186 (=FOLK 186), 187 (=FOLK 187), 189 (=FOLK 189), 196A
FOLK, 148, 190, 192
FREN 21, 60, 61, 62, 94A* (=WMST 94A*)
GERM 21, 40, 41, 68, 70, 71, 80, 81, 82
GREK 21
HIST 156
HNRS 27, 28, 40, 41
ITAL 41, 42
LATN 21
MUSC 80, 81, 82, 83, 84, 85, 86, 87, 88, 121, 132, 133, 134
PLSH 111
POLI 94C*
PORT 35, 40
RELI 55, 81, 82
RTVM 42 (=ENGL 42), 148
RUSS 50, 164, 165, 168, 171, 179
SOCI 128
SPAN 21, 35, 40, 46, 71, 72, 73, 120 (=WMST 120)
SPCH 46, 142, 143, 144, 145, 146 (=WMST 146)
WMST 86 (=ENGL 86), 87 (=ENGL 87), 94A* (=FREN 94A*), 96 (=CMPL 96), 120 (=SPAN 120), 146 (=SPCH 146), 151 (=ART 151)

Social Sciences Perspective

ANTH 94A,* 117, 121, 139, 140 (WMST 140), 141 (=WMST 141), 142 (=RELI 142 =FOLK 142), 165, 170, 184 (=LING 184), 186
CLAR 94A*
CLAS 42 (=WMST 42)
CMPL 92 (=WMST 92)
ECON 91 (=WMST 91), 94A,* 160, 168
ENGL 94A*
ENVR 153 (=PUPA 153)
GEOG 22, 30, 149, 150, 152, 153, 185
GERM 90 (=POLI 51, =HIST 93)
HIST 171
HNRS 30, 45
JOMC 146 (=POLI 146=RTVM 146)
LING 170, 175, 184 (=ANTH 184)
LSRA 40, 101 (=WMST 101), 111
NURS 176 (=WMST 176), 184 (=WMST 184)
PHIL 36
PHYE 63 (=WMST 63)
PHYS 37
PLAN 46, 73, 94A,* 94B,*108, 171 (=SOCI 171 =PUPA 171)
POLI 94A,* 94B,* 94G,* 119, 128, 132, 133, 146 (=JOMC 146=RTVM 146), 147 (=PWAD 147), 167, 170, 171, 176, 180
PSYC 24, 28, 33, 94A,* 94B,* 103
PUPA 94*
RELI 142 (=ANTH 142 =FOLK 142)
RTVM 146 (=JOMC 146=POLI 146)
SOCI 111, 112, 114, 115, 124, 125, 129 (=WMST 129), 131, 140, 145, 171 (=PUPA 171 =PLAN 171)
SPCH 21, 155
WMST 42 (=CLAS 42), 50, 63 (=PHYE 63), 91 (=ECON 91), 92 (=CMPL 92), 101 (=LSRA 101), 129 (=SOCI 129), 140 (=ANTH 140), 141 (=ANTH 141), 176 (=NURS 176), 184 (=NURS 184)

Western Historical/Non-Western/Comparative Perspective

Students who have taken two Western Historical courses in the General College must choose a Non-Western/Comparative course to satisfy the Historical Perspective at the B.A. level. Students who have taken one pre-1700 Western Historical course and one Non-Western/Comparative course in the General College must choose a course in Western History to satisfy the Historical Perspective at the B.A. level.

Western Historical:
AFAM 40, 41
AMST 20, 34H, 35H, 40, 62
ANTH 177
CLAS 43, 112 (=SPCH 112 =CMPL 112), 115, 118
CMPL 94A* (=ROML 94A* =HIST 94D*), 112 (=CLAS 112 = SPCH 112)
DRAM 170, 175
GEOG 154
HIST 14, 15, 16, 17, 27, 28, 31, 52, 53, 54, 56, 58 (=WMST 58), 59 (=WMST 59), 61, 62 (=WMST 62), 66, 67, 74, 75, 94A,* 94D,* (=ROML 94A* =CMPL 94A*), 95, 96, 101, 102A, (=PWAD 106), 102B, 104A, 104B, 112, 113, 119, 120A, 120B, 121, 126, 127A, 127B, 127C, 128, 129, 130, 131, 133, 135, 136, 144, 145, 146 (=PWAD 146), 147, 151, 154, 157, 158, 161, 162, 168 (=WMST 168), 169 (=WMST 169), 172, 186A, 186B
HNRS 31, 42, 43
JOMC 160
MUSC 51
PWAD 106 (=HIST 102)
RELI 24, 29, 56, 57, 59, 61, 71, 72
ROML 94A* (=HIST 94D* =CMPL 94A*)
SPCH 112 (=CLAS 112 =CMPL 112), 163
WMST 58 (=HIST 58), 59 (=HIST 59), 62 (=HIST 62), 168 (=HIST 168), 169 (=HIST 169)

Non-Western/Comparative:
AFAM 174 (=AFRI 174)
AFRI 40, 61 (=WMST 61), 63, 65, 66, 120, 121, 122, 123, 174 (=AFAM 174)
ANTH 26, 42, 55, 100, 120, 127 (=FOLK 127), 129 (=FOLK 129), 130, 132, 133, 137, 138, 147, 148, 150, 168, 178, 182
CHIN 145
CLAR 45, 46, 186, 187, 188, 189
DRAM 171
GEOG 159, 166, 167, 168
GERM 94B*
HIST 18, 24, 25, 30, 33, 34, 36 (=RELI 25), 37 (=RELI 26), 38, 39, 77, 78, 79, 81, 82 (=LATM 79), 83, 84, 86, 87, 88, 94E,* 174, 175, 177, 179, 181, 193, 194A, 194B, 197
HNRS 31, 44
LTAM 79 (=HIST 82)
POLI 123, 124, 125, 126, 143
RELI 25 (=HIST 36), 26 (=HIST 37), 40, 64, 65, 66, 67, 123, 162, 163, 172, 175, 178
RTVM 120, 147
RUSS 94A*
SOCI 150, 152, 153, 155
SPAN 53, 54
WMST 61 (=AFRI 61)

Natural and Mathematical Sciences Perspective

Students who completed two physical science courses in the General College must choose one life science course or one mathematical science course to satisfy the Natural and Mathematical Sciences Perspective at the B.A. level. Conversely, students who completed two life science courses in the General College must choose one physical science course or one mathematical science course to satisfy the Natural and Mathematical Sciences Perspective at the B.A. level.

Physical Sciences:
ASTR 31, 32, 33, 77
BIOC 7, 8, 100 (=BIOL 107)
CHEM 11, 15, 21, 25H, 130
GEOG 10, 11, 115
GEOL 11, 12, 15, 41, 42, 43, 46, 48
HNRS 29, 47
PHYS 20, 21, 24, 25, 26, 27, 28, 36, 38, 84, 94A*

Life Sciences:
ANTH 112 (=ANAT 112 =GNET 112)
BIOL 8, 11, 41, 43, 45, 47, 51, 52, 53, 54, 55, 62, 63, 72, 73, 78, 80, 94B,* 114, 148, 155, 165
ENVR 51
GEOL 16
HNRS 29, 47
MASC 101 (=BIOL 126 =ENVR 127 =GEOL 101)
PSYC 10

Mathematical Sciences:
COMP 14, 15
MATH 16, 17, 18, 22, 30, 31, 32, 33, 81, 83, 85, 101, 115
OR 40
PHIL 21, 71
STAT 11, 14, 23

Note: Students may not count Mathematics 16, 22, or 31 to satisfy this requirement if any one of these courses was used to satisfy the General College Basic Skills mathematical sciences requirement. Also, students cannot receive credit for both Comp 14 and 15. Statistics 11 may not be taken for credit if credit has already been obtained for Statistics 23, Economics 70, or Psychology 30.

Philosophical Perspective

AFAM 55 (=PHIL 55)
AMST 34H, 35H, 61
ANTH 123, 135 (=FOLK 135 =CMPL 135), 149, 174 (=RELI 174)
CLAS 94A,* 94B,* 111 (=SPCH 111 =CMPL 111)
CMPL 81, 111 (=CLAS 111 =SPCH 111), 142 (=PHIL 142), 145 (=PHIL 145)
ECON 159
ENGL 94B,* 94F,* 94G,* 196, 196B
FREN 94B*
GERM 94A* (=SLAV 94A*)
HIST 57
HNRS 32, 46
LING 83, 139, 145
PHIL 31, 32 (=RELI 32), 33, 34, 35, 37, 38, 41, 42 (=POLI 68 =PWAD 68), 43, 46 (=WMST 46), 55 (=AFAM 55), 56, 57, 58, 59, 60, 64, 65, 70, 72, 74, 76, 78, 80, 103, 106, 107, 109, 113, 142 (=CMPL 142), 145, (=CMPL 145)
PLAN 67 (=PUPA 67), 110
POLI 94E,* 94F,* 138 (=PWAD 138), 161, 163, 164 (=WMST 164), 165, 166
PWAD 138 (=POLI 138)
RELI 30, 32 (=PHIL 32), 35, 36, 37, 54, 58, 68, 84, 94A*, 138, 174 (=ANTH 174)
SPCH 65, 81, 111 (=CLAS 111 =CMPL 111), 131
WMST 46 (=PHIL 46), 90B (=ENGL 90B), 164 (=POLI 164)

Study Abroad

In an increasingly international world, personally experiencing another culture is a crucial part of an undergraduate education. UNC-Chapel Hill's College of Arts and Sciences and other undergraduate schools strongly encourage students to include a study abroad experience as part of their undergraduate program. Study abroad experiences normally come in the sophomore or junior years, but are also available to seniors.

The Office of International Programs offers a wide variety of opportunities for students to study at foreign institutions. Programs range from a summer to a full academic year. Study abroad courses can meet perspective requirements in both the General College and the College of Arts and Sciences, and major requirements in nearly all majors.

UNC-Chapel Hill offers study abroad programs in England, France, Italy, Denmark, Germany, Japan, China, Australia, the Soviet Union, Argentina, Mexico, Spain, Hungary, Czechoslovakia, Ireland, and Poland. New programs are under development and individually planned programs are also possible.

Students already on financial aid receive additional support to cover increased costs of study abroad. Others may apply for aid specifically for their study abroad programs.

The Office of International Programs assists with choosing appropriate programs, making housing and transportation arrangements, and academic scheduling. It also maintains contact with students while they are abroad, assists in registration, and is available to parents to answer questions or provide any needed help. The Study Abroad Office is in Caldwell Hall.

Division of Academic Affairs

The General College

Stephen S. Birdsall, *Ph.D., Dean*
Donald Charles Jicha, Ph.D., *Associate Dean*
Kathleen O. Benzaquin, M.S., *Assistant Dean*
Carolyn C. Cannon, M.A., *Assistant Dean*
Fred M. Clark, Ph.D., *Assistant Dean*

Dorothy Bernholz, J.D., John G. Blanchard, M.S.W., George W. Cloud, M.A., James L. Coke, Ph.D, M. Christine Crenshaw, M.S., Jane Danielewicz, Ph.D., Brian T. Davis, M.A., Herb L. Davis, E.D.D., Alice Dawson, B.S., Kimberly H. Deloatch, B.S., LuJean DeSaix, Ph.D., L. Elaine Dieter, M.S., Robert J. Gwyn, Ph.D., Kerry Haynie, B.A., Anthony E. Hilger, Ph.D., Ronald W. Hyatt, Ph.D., Timothy Louge, M.A., Sara Mack, Ph.D., Raleigh C. Mann, B.A., Steven W. Matson, Ph.D., David McFarland, Ph.D., Jerry L. Mills, Ph.D., Edward D. Montgomery, Jr., Ph.D., Nell Murphy, M.S.N., Tracy Nanney, B.A., Boyd L. Newnam, Ph.D., Joy Renner, B.S., Lawrence G. Rowan, Ph.D., Robert L. Smith, M.S., Thomas N. Sorrell, Ph.D., Dixie L. Spiegel, Ph.D., JoAnne Thomas, B.S., Laura D. Thomas, M.S., Thomas Warburton, Ph.D., *Advisers*

All freshmen and sophomores are enrolled in the General College. Freshmen are required to use these two years to fulfill all or most of the General Education requirements. Many students do not know upon entering the University which major they wish to pursue. These required courses, combined with several electives, provide a welcome chance to explore different areas of interest. Students who do plan to enter a specific major or professional program can combine their General Education requirements with other required courses in their chosen field.

Each student in the General College receives the personal assistance and encouragement of an adviser (usually a regular, full-time member of the University faculty) in selecting courses, maintaining required scholastic standards, and planning a complete educational program. Every effort is made to place students in classes appropriate to their level of precollege preparation and achievement.

Students will be transferred to an upper college during or immediately after their fourth semester provided they have a grade-point average of 1.75 or higher on all work taken at the University and are accepted by the school of their choice. Students may be transferred at their request at the end of their first year (completion of two semesters in residence at the University) provided they have a grade-point average of 3.0 or higher and at least 45.0 academic hours passed (includes advanced placement and transfer credit) and their transfer is approved by the upper college or professional school of their choice.

Requirements for Degree Programs

Bachelor of Arts

Students who wish to major in one of the forty or so degree programs in the College of Arts and Sciences will find that in their General College years they have a great variety of courses from which to choose. The Bachelor of Arts major requires only the General Education requirements, and several free electives. The pattern of courses in the junior-senior years is similar: 6 - 8 courses in a major field, 4 General Education required courses, and enough free electives to complete a total of 120 hours.

Bachelor of Science and Other Specialized Degree Programs

Many students know, when they enter the University, that they wish to pursue a Bachelor of Science degree, or a more specialized program, within or outside of the College of Arts and Sciences. These students can combine their General Education courses with other required courses in their chosen field. The charts on the preceding pages show which courses required by specific programs can be taken in the General College. Students should be aware, however, that many of these programs are highly competitive, and the natural sciences and health sciences areas often require strong science and mathematical skills.

All of the programs listed in the preceding pages require:
English 11, 12
2 semesters of physical education activities
9 General Education Perspective courses in the General College (unless exemptions are specified)

Note, also, that 1) several Bachelor of Science programs in the Natural Sciences require both 2 - 4 math courses and a foreign language through level 4; in some instances, a modern foreign language is required, and 2) Bachelor of Fine Arts in Studio Art, Bachelor of Music, and Bachelor of Music Education programs vary somewhat from the basic pattern of General College requirements. For further information on any program, consult the degree requirements section under "The College of Arts and Sciences," or the catalogs of separate schools within the University, where the 4 year degree requirements will be found.

Special Programs for Undergraduates

Undergraduate Honors Program. The Honors Program offers exceptionally well-qualified freshmen, sophomores, and juniors an opportunity to take part of their general education curriculum in special honors seminars and honors sections. Honors seminars are special topics courses, limited in enrollment to fifteen students, and taught by outstanding members of the university faculty. Honors sections of regular departmental course offerings are also limited in enrollment and are taught by permanent

members of the university faculty. Both honors seminars and sections emphasize critical reading, class discussion, and expository writing.

Some enrolling freshmen are invited to participate immediately in the Honors Program; other students are invited into the program during their freshman or sophomore years on the basis of outstanding academic performance. Honors courses are open to all academically qualified students on a space-available basis.

The Honors Program Student Advisory Board coordinates social and co-curricular activities for Honors Program students. The activities include faculty/student socials, non-credit seminars and discussion groups, the annual Honors Colloquium, and community service projects.

Senior departmental honors programs are offered in nearly fifty departments, curricula, and professional schools throughout the university. Generally, all students with at least a 3.2 overall grade-point average at the end of the junior year are eligible to participate. Although the programs vary somewhat from department to department, most involve the preparation of an honors thesis. It is on the basis of participation in senior honors that a student may be graduated from the university "with Honors" or "with Highest Honors."

The undergraduate honors program is administered by the Associate Dean for Honors of the College of Arts and Sciences.

Phi Eta Sigma. Phi Eta Sigma is a national scholastic honor society for freshmen. In order to qualify, a freshman must pass 15 academic hours (excluding physical education activity courses) with a grade point average of 3.5 and no grade lower than C in the first semester, or 30 academic hours with a grade point average of 3.5 and no grade lower than C in the first two semesters. Further information may be obtained from the Honors Office, 300 Steele Building.

Credit by Examination. Any student may earn credit for a course by successful completion of an "advanced standing" examination in that course administered by the department concerned, provided that advance approval to take the examination (at least 30 days before examination is taken) has been granted by the department or school. Recommendation for credit by examination is submitted by the department or school to the student's academic dean for final approval. Credit so earned will not be contingent upon completion of further work in the subject.

Credit by College Board Advanced Placement Examination. A score of 3 or higher on any advanced placement examination of the College Board will entitle the student to credit for the comparable university course as determined by the Director of Undergraduate Admissions in consultation with the Chair of the appropriate department. Such credit will not be contingent upon the completion of further work in the subject.

Health Professions Advising Office. The Health Professions Office, located in 201D Steele Building, provides advice and assistance on course selection, sequencing opportunities for health-related experiences, test preparation, and admission requirements. This office also helps prepare students for postbaccalaureate programs in veterinary medicine and optometry. It also provides information on all health sciences programs offered at the University.

The Predental/Premedical Track. UNC-Chapel Hill has no formal predental or premedical programs; instead students should choose one of the traditional B.A. or B.S. programs. Most B.S. programs require the same mathematics and natural science courses necessary for admission to dental and medical schools. Many B.A. programs do not have such requirements so the student must take the mathematics and natural science courses as electives.

Some medical schools require a year of calculus. Therefore, students are encouraged to take Math 31 and 32 in order to keep all of their options open for majors and medical schools. These courses are good preparation for the science requirements and should be taken early. If the student selects a B.A. program, Chemistry 11 and 11L are recommended for the first semester.

In view of ongoing changes in preprofessional course requirements for dental and medical schools, students are strongly encouraged to visit the Health Professions Advising Office, 201D Steele Building. The latest requirements both for courses and the required admission tests can be obtained from this office. This office also provides health career assistance in preparing for baccalaureate and postbaccalaureate programs in the allied health programs, as well as in veterinary medicine, optometry, etc.

Preparation for the Study of Veterinary Medicine. The School of Veterinary Medicine opened in Raleigh at North Carolina State University in 1981. Prerequisite and admission information is in Health Professions Advising Office, 201D Steele.

Prelaw Track. Many students enter the University each fall with aspirations to attend law school. At UNC-Chapel Hill there is no formal curriculum for prelaw students. Instead students should follow one of the traditional four year B.A. or B.S. degree programs. Most law schools do not require, or even recommend, that students major in any particular field. However, most schools subscribe to the selection of a course of study that will provide a foundation for the undertaking of legal studies; reading, writing, speaking, and analytical and critical thinking skills.

The Association of American Law Schools recommends a prelaw program involving education for "comprehension and expression in words, a critical understanding of the human institutions aned values with which the law deals, and creative power in thinking." Graduates of law schools who have a strong second area of competence often have excellent job placement possibilities. For example, patent attorneys are frequently selected for their background in the sciences.

Applicants to law school must present evidence of academic achievement of high quality and strong Law School Admission Test scores. Prelaw students should emphasize academics. Students should enroll in the UNC-Chapel Hill Reading Program at the earliest opportunity in order to increase reading speed and comprehension.

Students are encouraged to visit the Prelaw Office in Steele Building and the Student Development and Counseling Center in Nash Hall.

Degree by Requirements Program

DEGREE PROGRAM	MATHEMATICS	FOREIGN LANGUAGE(S)	NATURAL SCIENCES (1 LAB SCIENCE REQUIRED)
B.A. (Education-Elementary) (K-6)	General College Requirements		1 biological & 1 physical science Psych 10 & 1 other science
B.A. (Education-Secondary and Special Subjects	,,		for all other requirements consult General College adviser in Education
B.A. (Education-Middle School)	,,		,,
B.A. in Journalism and Mass Communication	,,		*
B.A. (Leisure Studies & Recreation Administration)	,,		Psyc 10 recommended
B.F.A. in Studio Art	,,		
B.M. (Applied Music)	for all requirements consult General College adviser in Music		
B.M. Ed. (Music Education)	General College Requirements		some perspective courses may have to be postponed
*B.S. (Applied Sciences) Computer Science Option	Math 32, 33, 83	minimal requirement	Chem 11, 11L, 21, 21L
Biomedical Materials Science	Math 31, 32, 33, 83	,,	Chem 11, 11L, 21, 21L
Materials Science Option (Chemistry-Based)	Math 31, 32, 33, 83	,,	Chem 11, 11L, 21, 21L
Materials Science Option (Physics-Based)	Math 31, 32, 33, 83	,,	Chem 11, 11L, 21, 21L
Polymer Science Option	Math 31, 32, 33, 83	,,	Chem 11, 11L, 21, 21L
B.S. (Biology)	Math 31 and 1 from Math 32, Comp 14, Stat 11	any language through level 4	Chem 11, 11L, 21, 21L
B.S. (Business Admin.)	Math 22 or 31, Stat 23	minimal requirement	
B.S. (Chemistry) 6 perspective courses only	Math 31, 32, 33, 83	any language through level 4 if the language was studied in high school OR through level 3 if not studied in high school	Chem 11, 11L, 21, 21L
B.S. (Dental Hygiene)	2 courses; Stat 11 preferred	minimal requirement	Chem 11, 11L, 21, 21L, OR Biochemistry 7, 7L, 8, 8L
B.S. (Geology)	Math 31–32	any language through level 3	Chem 11, 11L, 21, 21L
B.A. (Industrial Relations)	Math 22 or 31 & 1 other math	minimal General College requirements	Psyc 10 & Lab Science
B.S. (Mathematics)	Math 31, 32, 33, 81, 83	any language through level 4	Phys 26, 27, OR 24, 24L, 25, 25L
B.S. (Mathematical Sciences)	Math 31, 32, 33, 81, 83	any language through level 4	Options: Applied Math-Phys 26, 27 Comp—same Stat–see above requirements B.S. (Math) Actuarial Science–above requirement for B.S. (Math) recomm.
B.S. (Clinical Laboratory Science/ Medical Technology)	Math 30, Stat 11 or Math 31	General College Requirements	Chem 11, 11L, 21, 21L
B.S. (Nursing)	Stat 11	minimal General College requirements	Chem 11, 11L, 21L, or Biochemistry 7, 7L, 8, 8L
B.S. (Pharmacy) 6 Perspective Courses Only	Math 30–31 and Stat 11	General College requirements**	Chem 61, 41, 41L Chem 62, 62L

*Students must fulfill regular perspective requirement; no particular course specified.

**Other history may be replaced by a required 2nd, 3rd, or 4th level foreign language course. Either fine arts or literature courses may be replaced by a 2nd, 3rd, or 4th level foreign language course.

SOCIAL SCIENCES (2)	WESTERN HIST./ NON-WESTERN/ COMPARATIVE (2)	AESTHETIC (2)	PHILOSOPHICAL (1)	OTHER REQUIRED COURSES
for all other requirements, consult General College adviser in Education				
,,				
,,				
*	*	*	*	Jomc 53 after DWE or Engl 30 with at least grade of C
Soci 10 recommended	*	*	*	Lsra 10 required; Lsra 40 recommended
*	*	*	*	Art 1, 2, 3; 13 or 18; either 15, 16A, 16B, 17A, 17B, or 17C; and 1 art history course
delayed until junior-senior years				Musi 31–34, 54–57; 4 semesters of applied music including ensemble
delayed until junior-senior years				
*	*	*	*	Computer Science: Comp 14 Phys 26, 27, 28, 28L, 61
*	*	*	*	Biomedical Materials Science Chem 41, 41L, 51, 61, 62, 62L Phys 26, 27
*	*	*	*	Materials Science: (Chemistry-Based) Chem 41, 41L, 51, 61, 62, 62L Phys 26, 27
*	*	*	*	(Physics-Based) Chem 51 Phys 26, 27, 28, 28L, 61
*	*	*	*	Polymer Science: Chem 41, 41L, 51, 61, 62, 62L Phys, 26, 27
*	*	*	*	Chem. 21, 21L, 61, 41. 41L, 62, 42, 42L
Econ 10, Poli 41	*	*	*	B.A. 24; 71; 96; Econ 100 or 101
1 required course	1 required course	1 required course	*	Phys 26, 27; Chem 41, 41L, 42, 51, 61, 62, 62L
Soci 10 & 1 other	*	*	*	Psyc 10, Spch 33 or 52, Recommended Biol 45, 63L, Bacti 55
*	*	*	*	Geol 11, 11L, 12, 15, or 41; Geol 16, 42, 46, 132, or 135
Econ 10, Soci 10	Hist 22	*	*	Either Soci 12 or Psyc 33; 1 from Econ 70, BS 24, Psyc 30, Soci 52
*	*	*	*	Comp 14
Comp & Actuar. option: Econ 10 ORSA option: Econ 10 or complete Phys 26, 27 (or 24, 24L, 25 25 L or 24C, 24L, 25C, 25L) as Nat. Sci.	*	*	*	Comp 14 for all options & Comp opt.: Comp Sci 114 Apply. Math: Phys 28 (may be done in junior-senior year also)
*	*	*	*	Chem 41, 41L, 61; Biol 11, 11L, 45, 63L
2 courses (2 different departments): one course in Sociology or Anthropology preferred	*	*	*	Biol 11, 11L, 45, 63L, Mcro 55, or 51, Phys 92, Psyc 10
Econ 10 recommended (1 required course only)	1 course required**	1 course required**	*	Biol 11, 11L, 45, 63L Chem 41, 41L, 61, 62, 62L, Phys 20 (or Phys 24, 24L)

Degree by Requirements Program

DEGREE PROGRAM	MATHEMATICS	FOREIGN LANGUAGE(S)	NATURAL SCIENCES (1 LAB SCIENCE REQUIRED)
B.S. (Physics)	Math 31, 32, 33, 83	minimal General College requirements	Chem 11, 11L, 21, 21L
B.S. (Psychology)	Math 31, 32,	modern language through level 4	Psyc 10; Biol 11, 11L
B.S. (Public Health) a) Biostatistics	Math 31, 32, 33	minimal General College requirements	Biol 11, 11L & 1 other science
B.S. (Public Health) b) Environmental Science and Policy	Math 31, 32	minimum General College requirements	Chem 11, 11L, Biol 1:, 11L
B.S. (Public Health) c) Health Behavior and Health Education	Stat 11 plus one additional Mathematical Science course	minimum General College requirements	Biol 11, 11L, Psyc 10
B.S. (Public Health) d) Health Policy and Administration	Two of the following: Math 22 or 30 or 31 or Stat 23	minimum General College requirements	Biol 11, 11L, & 1 other science
B.S. (Public Health) e) Nutrition	Math 30 and 31	minimum General College requirements	Chem 11, 11L, Biol 11, 11L
B.S. (Radiologic Sciences)	One from Math 30, 31, 32, Comp 14, Stat 11	minimal General College requirements	Chem 11, 11L, 21, 21L or Biochemistry 7, 7L, 8, 8L
B.S. In Science Teaching	Math 31, Comp 14	minimum General College requirements	Biol 11, 11L, Chem 11, 11L

The College of Arts and Sciences

Stephen S. Birdsall, Ph.D., *Dean*
M. Richard Cramer, Ph.D., *Associate Dean*
Darryl J. Gless, Ph.D., *Associate Dean*
P. Geoffrey Feiss, Ph.D., *Associate Dean*
Rachel A. Rosenfeld, Ph.D., *Acting Associate Dean*
Robert C. Allen, Ph.D., *Associate Dean for Honors*
Rosalind Fuse-Hall, J.D., *Associate Dean for Student Counseling*
Harold Woodard, M.A., *Acting Assistant Dean for Student Counseling*
Carolyn Cannon, Acting *Associate Dean for Academic Services*
Marilyn A. Scott, Ph.D., *Assistant Dean*
Donald W. Misch, Ph.D., *Assistant Dean*

Harold L. Andrews, Ph.D., Kenneth H. Bynum, Ph.D., Joseph Carter, Ph.D., David Crescenzo, J.D., Cynthia Dessen, Ph.D., Michael Follo, Ph.D., Glenn Hayslett, M.A., James R. Kessler, M.A., Richard A. King, Ph.D., Robert G. Kirkpatrick, Ph.D., Patrick P. O'Neill, Ph.D., Rosa Perelmuter, Ph.D., Barbara Stenross, Ph.D.,Wyatt Wells, Ph.D., James A. Wilde, Ph.D., *Advisers.*

The College of Arts and Sciences offers work on the junior and senior levels for completing programs of study leading to the Bachelor of Arts degree and to the more specialized degrees of Bachelor of Science, Bachelor of Music, and Bachelor of Fine Arts. Besides degrees offered to majors of individual departments, special interdisciplinary curricula lead to degrees in Administration of Criminal Justice, African Studies, Afro-American Studies, American Studies, Applied Sciences, East Asian Studies, Industrial Relations, Interdisciplinary Studies, International Studies, Latin American Studies, Mathematical Sciences, Peace, War, and Defense, Public Policy Analysis, Russian and East European Studies, and Women's Studies.

Admission and Choice of Major

Students enter the College by transfer from the General College or by admission to advanced standing in the University. In either case, the General College requirements must be met, and students who enter the College with freshman-sophomore deficiencies must include the fulfillment of these requirements in their junior-senior programs.

Students will have the assistance of one of the advisers in the Dean's office when selecting a their major field or special program. If one of the disciplinary degree programs is selected, advisers in the major department will assist in the selection of courses. Final responsibility for the accept-

SOCIAL SCIENCES (2)	WESTERN HIST./ NON-WESTERN/ COMPARATIVE (2)	AESTHETIC (2)	PHILOSOPHICAL (1)	OTHER REQUIRED COURSES
Perspective courses may have to be delayed until junior-senior years				Phys 26, 27, 28, 28L, 61, 103
*	*	*	*	Comp 14; Natural Science course with lab; two of Psyc 24, 28, 33, or 80
*	*	*	*	*Biostatistics:* Comp Sci 14
Econ 10 recommended	*	*	*	*Environmental Protect:* Chem 21, 21L; Phys 24, 24L, 25, 25L; Comp 14; Biol 54; Geol 41 or 48
Anth 41, Soci 10 or 20	*	*	*	*Health Education: Psyc 33;* Spch 33 or 53; Nutr 50 (May be done in Jr.-Sr. years.)
Econ 10	*	*	*	*Health Policy and Administration:* BA 71 and Engl 32 or 33 (may be done in junior-senior years)
*	*	*	*	*Nutrition:* Chem 21, 21L, 61; Biol 45 and 63L Nutr 50, Phys 24, 24L, and 25, 25L or Phys 20 (can be taken in junior-senior years)
*	*	*	*	Biol 11, 11L, 45, 63L, Psyc 10; Phys 24, 24L and 25, 25L
*	*	*	*	Consult General College Education adviser

ability of course selection and for full compliance with all published regulations and requirements of the College rests with the student.

To avoid problems with registration and to insure graduation by the expected date, students are strongly encouraged to declare a major officially during their sophomore year or early in their junior year. Students who have not declared a major prior to their seventh semester may have their preregistration cancelled and not be permitted to register until they have seen an adviser and chosen an academic major. Students who have not declared a major by the beginning of their sixth semester will be notified of the impending penalty associated with their registration for the next semester.

Students' majors are generally classified into one of the four divisions of the College. A few programs, most commonly interdisciplinary majors, reside in two divisions.

The Division of Fine Arts

James McKinnon, *Chair*
Mary Sturgeon, *Vice-Chair*

Departments: Art, Dramatic Art, Music, Radio, Television, and Motion Pictures.

The Division of the Humanities

Beverly Long, *Chair*
Maria Salgado, *Vice-Chair*

Departments: Classics, English, Germanic Languages, History, Linguistics, Philosophy, Religious Studies, Romance Languages, Slavic Languages, Speech Communication.

Curricula: African Studies, Afro-American Studies, American Studies, Comparative Literature, East Asian Studies, Folklore, Latin American Studies, Russian and East European Studies, Women's Studies.

The Division of Basic and Applied Sciences

Royce W. Murray, *Chair*
Paul Fullager, *Vice-Chair*

Departments: Biology, Chemistry, Geography, Geology, Computer Science, Mathematics, Operations Research, Physics and Astronomy, Psychology, Statistics.

Curricula: Applied Sciences, Ecology, Marine Sciences, Mathematical Sciences.

The Division of the Social Sciences

Melissa Bullard, *Chair*
Rachel Rosenfeld, *Vice-Chair*

Departments: Aerospace Studies, Anthropology, City and Regional Planning, Economics, Geography, History, Naval Science, Philosophy, Physical Education, Exercise and Sport Science, Political Science, Psychology, Sociology.

Curricula: Administration of Criminal Justice, African Studies, Afro-American Studies, American Studies, East Asian Studies, Industrial Relations, International Studies, Latin American Studies, Leisure Studies and Recreation Administration, Peace, War, and Defense, Public Policy Analysis, Russian and East European Studies, Women's Studies.

Requirements for Degrees

Candidates for all degrees must establish eligibility as defined under "Academic Procedures." Requirements for the following six degrees can be found in this section.

Bachelor of Arts
Bachelor of Arts with a Major in Interdisciplinary Studies
Bachelor of Science
Bachelor of Fine Arts
Bachelor of Music
Bachelor of Science in Dentistry or in Medicine

Please refer to the Academic Departments section for information about degree requirements for specific majors.

Bachelor of Arts

Students must complete successfully at least 120 semester hours of course work (not including physical education activities courses) and attain a final cumulative grade point average (GPA) of not less than 2.0. (Most courses, if repeated, will not count toward credit hours required for graduation. Any exception to this policy, such as Applied Music, Special Studies, etc., must receive the express approval of the Dean's Office in the College of Arts and Sciences.) A minimum of 45 hours of academic credit must be taken at UNC-Chapel Hill. At least 24 of the last 45 hours must be taken on the UNC-Chapel Hill campus. Every UNC-Chapel Hill student must fulfill at least 24 of the last 30 hours with UNC-Chapel Hill courses. These may include courses taken by correspondence or offered in Study Abroad programs sponsored by the University's official international programs.

Students admitted to the University beginning with or after fall semester 1982 must complete the freshman-sophomore pattern of courses required by the General College, in addition to a junior-senior distribution of at least 18 semester hours in the major field and at least one additional course in four of the five Perspectives. A Non-Western/Comparative course must be taken for one of the perspectives if such a course was not used to satisfy the Historical perspective requirement in General College.

Courses crosslisted with one's major or minor are to be treated as courses in the major or minor department, regardless of what the student's registration shows. This means the courses may not be used to satisfy B.A.-level perspectives requirements and may not be taken "pass-fail."

No more than 40 semester hours of courses in any subject may be used toward fulfillment of the B.A. graduation requirement. Twelve semester hours of courses from professional schools (Business Administration, Education, Journalism and Mass Communication, Law, Library Science, Social Work, Dentistry, Medicine, Nursing, Pharmacy, or Public Health) may be offered for degree credit in B.A. and B.S. programs.

Students admitted to the University prior to fall semester 1982 must complete the freshman-sophomore pattern of courses required by the General College, as well as a junior-senior distribution of at least 18 semester hours in the major department, at least 15 semester hours in allied departments, and at least 15 semester hours in nondivisional departments.[1] Courses in departments listed in more than one division (History, Philosophy, Psychology) may not be counted as both allied and nondivisional in the same program. Courses crosslisted with the major may not count as electives. Only four allied or nondivisional electives may be taken in a single subject. In no case may more than forty hours of courses in any subject be used toward fulfillment of the B.A. graduation requirement.

The following professional school courses are approved as College Electives and are therefore exempted from the 12-hour maximum professional school quota for B.A. and B.S. degree credit:

Business Administration 71, 74, 96G or 96M
Education 31, 41, 71
Environmental Sciences 51
Health Education 85
Journalism and Mass Communication 53
MAHP 40
Nursing 114
Nutrition 40
Pharmacy 55

Students must have completed a satisfactory major as prescribed by departmental or curriculum requirements. A minimum of 18 hours of C or higher (not a C average) in the major is required. Students transferring credits in their major field must earn a grade of C or higher in at least three-fourths of the courses taken at UNC-Chapel Hill. Students transferring from another institution must take at least half of their course requirements in the major at UNC-Chapel Hill.

Double Majoring

A student may earn the B.A. degree with a double major by meeting all major requirements and elective distribution requirements in the two disciplines selected; in some cases, it would be possible to do this in as few as 120 semester hours.

Courses that can be used for both a major in an interdisciplinary curriculum and a major in a single department may be double counted for double majors, with the

following general limitation: more than half of the courses taken in each major must be exclusive to that major and not double counted.

[1] Departments in the same division as the department of the student's major are "allied"; those in the other divisions are "nondivisional," except the humanities courses are allied to majors in the fine arts and fine arts are allied to majors in the humanities.

Bachelor of Arts with a Major in Interdisciplinary Studies

Students interested in an interdisciplinary degree program not covered by any degree-granting curriculum should apply to the Director of Interdisciplinary Studies (314 Steele) in the second semester of the sophomore year or the first semester of the junior year. Students should have a grade-point average of at least 2.4 and at least 45 hours left before graduation.

General College: Students should meet all General College requirements before entering the Interdisciplinary program. While in the General College, they may wish to choose electives that are relevant to their later field of study.

Third and Fourth Years: Specific core course requirements must be distributed as follows: eight courses from three departments, with a maximum of four from any one department. Core courses should be appropriate for juniors and seniors majoring in those departments and are not to be freshman-sophomore-level courses. They should form a coherent area of study to which the student is able to give a title (e.g., Environmental Studies, Medieval Studies, Public Relations, Urban Studies) and which the student is unable to get by majoring in one of the departments or already established curricula of the College of Arts and Sciences. Because the Interdisciplinary Studies major is for those who cannot satisfy the requirements of any recognized major offered by the University, those choosing this major may not declare a second major or minor.

For information about Renaissance Studies for the Interdisciplinary Studies major, please consult with either Professor Masters at 230 Dey Hall or Professor Headley at 500 Hamilton Hall. Professor Crawford-Brown at 112 Rosenau Hall should be consulted by those interested in constructing an Interdisciplinary Studies major focusing on Environmental Studies.

With permission of the relevant professional school, one may use up to 12 hours of professional courses (e.g., in Business Administration, Journalism and Mass Communication, Public Health) in the core. This can be advantageous to students who want some concentration in these areas but who also want a degree in Arts and Sciences. But Interdisciplinary Studies majors are still restricted by the College rule that there be no more than 12 hours of professional courses in the 120 hours required for the B.A. degree.

Honors: Qualified students may pursue departmental or interdisciplinary honors through this program.

Bachelor of Science

Four-year programs leading to the degree of Bachelor of Science provide for specialization in a particular field, necessary instruction in related fields, including foreign language, and somewhat reduced requirements in nonscientific fields.

This degree is awarded in Applied Sciences, Biology, Chemistry, Geology, Mathematical Sciences, Mathematics, Physics, and Psychology. It is also awarded in Administration of Criminal Justice. Specific junior-senior requirements for each scientific field degree are stated in the headnote to the course descriptions of the respective department or curriculum.

Bachelor of Fine Arts

A four-year program leading to the degree of Bachelor of Fine Arts is offered by the Department of Art. It provides, for qualified students, preprofessional training in creative aspects of the field of Art. Approximately one half of the program will be in the field of the major and the other half will be in the liberal arts and sciences. Junior-senior requirements for the degree are stated in the headnote to the course descriptions of the Art Department.

Bachelor of Music

The four-year program leading to the degree of Bachelor of Music emphasizes training and achievement in the performance or composition of music. Junior-senior requirements for the degree are stated in the headnote of the course descriptions of the Department of Music. Approximately one half of the program will be in the field of the major and the other half will be in the liberal arts and the sciences.

Bachelor of Science in Dentistry or in Medicine

These two programs comprise a mechanism by which an undergraduate student at The University of North Carolina at Chapel Hill with superior academic credentials and a definite commitment to study dentistry or medicine can receive a bachelor's degree if admitted to the UNC-Chapel Hill School of Dentistry or the UNC-Chapel Hill School of Medicine after three years of undergraduate study. Eligibility for this degree is dependent upon admission to the UNC-Chapel Hill School of Dentistry or the UNC-Chapel Hill School of Medicine; completion of at least the third year (30 semester hours) of preprofessional work at The University of North Carolina at Chapel Hill; and evidence of satisfactory completion of the first year of the School of Dentistry or the School of Medicine.

These degree programs should not be declared by students who have not yet been admitted to the School of Dentistry or the School of Medicine. These programs

should not be considered indicative of minimum requirements for admission or representative of an especially desirable predental or premedical curriculum. Satisfactory completion of the stated quantity of academic work does not assure admission to the professional school. Students interested in pursuing either program should consult the designated adviser in the College of Arts and Sciences and the Admissions Office in the respective schools.

For the B.S. in Medicine: All General College and Arts and Sciences basic skills and perspectives must be met. Specific natural science courses to be taken include:

CHEM 11, 11L, 21, 21L, 41, 41L, 61, 62, 62L
PHYS 24, 24L, 25, 25L
BIOL 11, 11L, 45 and 63L or 63 and 63L or 62 and 62L.

For the B.S. in Dentistry: All General College and Arts and Sciences basic skills and perspectives must be met. Specific natural science courses to be taken include:

CHEM 11, 11L, 21, 21L, 61, 62
PHYS 24, 25
BIOL 11, 11L, 45 and 63L or 63 and 63L or 62 and 62L.

Additional electives must be taken in both programs to total at least 96 academic hours in the three years of pre-professional-school (undergraduate) study.

Academic Minors

As of fall 1990, the College has been authorized to give official recognition to academic minors in Arts and Sciences departments and curricula awarding such recognition. In addition, Arts and Sciences students may minor in Business Administration with the permission of the School and in Technical Writing (through the School of Journalism and Mass Communication).

The following Arts and Sciences minors are available. Specific junior-senior requirements for each minor are stated in the headnotes to the course descriptions of the respective department, curriculum, or school.

African Studies (African & Afro-American Studies)
Afro-American Studies (African & Afro-American Studies)
American Studies
Art History
Astronomy (Physics)
Biology
Chemistry
Chinese (East Asian Studies)
Comparative Literature
Dramatic Art (dramaturgy; theatrical design)
Folklore
French (Romance Languages)
Geography
Geology
Germanic Languages
Greek (Classics)
History
Italian (Romance Languages)
Japanese (East Asian Studies)
Latin (Classics)
Linguistics
Marine Sciences
Mathematics
Mathematical Sciences
Music History and Music Theory
Philosophy
Physical Education, Exercise and Sport Science
Physics
Portuguese (Romance Languages)
Public Policy Analysis
Recreation Administration
Religious Studies
Russian and East European Literature in Translation (Slavic Languages)
Russian Language (Slavic Languages)
Spanish (Romance Languages)
Women's Studies

The requirements and limitations that apply to all undergraduate academic minors are as follows:

A. A student may have only one minor regardless of the student's major degree program.
B. Departments may exclude certain minors from being elected and completed by students majoring in these departments.
C. Students pursuing a double (Bachelor of Arts) major program may not pursue the completion of a minor.
D. As a general rule, the same course may not be counted for the fulfillment of a part of the core requirement in both the major and the minor. However, courses that can be used for both a major in an interdisciplinary curriculum and a minor in a single department may be double counted with the following limitations: More than half of the courses used in the minor must be exclusive to that particular field and not part of the major.
E. At least nine hours of the (four- or five-course) minor core must be completed at The University of North Carolina at Chapel Hill and NOT at other academic institutions. Certain minor departments may require that more than nine hours must be completed at the University.
F. Courses in the minor department may not be used to satisfy Arts and Sciences perspective requirements.
G. If more than a single course in the minor core is used to satisfy a General College perspective requirement, (an) advanced course(s) in the minor field recommended by the minor department/ curriculum/school must be completed to satisfy the minor core requirement.
H. A minimum of twelve hours of C grades or higher is required in the minor core unless otherwise (more than 12 hours) specified by the minor department.

l. All courses in the minor department must be taken for a grade, though one exception to this rule will be allowed, as with courses in the major (i.e., one course taken before the declaration of the minor can count toward that minor).
J. If students plan to pursue the completion of a minor, they are encouraged to declare their minor early in the junior year.
K. Currently, students may use a maximum of 12 professional school hours as electives to fulfill their Arts and Sciences semester hour graduation requirement (120 hours + 2 Physical Education Activity hours). Arts and Sciences students electing professional school minors are exempt from this rule to the extent that the minor requires additional professional school courses.

Degrees with Honors

Programs providing an opportunity for honors study for qualified students are offered in all four divisions of the College. The honors programs are supervised by the individual departments and curricula, in conjunction with the Assistant Dean for Honors. Though they are not completely uniform in the various disciplines, all have these general procedures and requirements:

A. Application for honors work: students should apply to the honors adviser in their major departments or curricula. Ordinarily, application is made at the end of the junior year, although it is done earlier in some departments. Detailed information concerning application should be obtained from the honors adviser in the major.
B. Requirements for eligibility: in general a minimum overall GPA of 3.2 is required for admission to honors work, though a higher average is required in some departments.
C. Nature and purpose of honors study: these programs are provided for students who have demonstrated a very high level of scholastic ability and achievement and who desire to pursue an intensive, individualized program of study in their major discipline. Honors studies ordinarily will consist of one or more of the following projects: the preparation of an honors thesis or essay, an honors research project, an independent research or reading program, the completion of advanced course work in the major not normally required of students in that major. A special written or oral examination on the student's program is required during the second semester of the senior year. The department may impose other requirements that it deems appropriate. In every instance, study for honors will require academic excellence.

When the student has fulfilled all requirements, the department will recommend to the Associate Dean for Honors that the degree be awarded "with honors," or "with highest honors." The degree with highest honors is conferred in recognition of extraordinary achievement in the work of the honors program and predominantly excellent course grades in the major.

D. Procedures for granting degrees with honors: the grade for course work in connection with an honors project is determined by the faculty sponsor and is (like all grades) subject to appeal. Successful completion of honors course work does not automatically confer departmental honors. Before awarding a degree with honors, the College of Arts and Sciences requires the recommendation of a departmental honors committee on the basis of departmental criteria for honors (normally an excellent paper and/or exam and a high GPA in the major field), and the endorsement of that committee's recommendation by the chairman of the department. A negative recommendation by the department is final and cannot be appealed. The final decision to award a degree with honors is made by the Associate Dean for Honors on the basis of the department's positive recommendation and the student's cumulative GPA.

Degrees With Distinction

To graduate "with Distinction" or "with Highest Distinction" one must have completed at least 45 academic hours at UNC-Chapel Hill and have an overall grade point average of at least 3.5 and 3.8, respectively.

Phi Beta Kappa

This national collegiate honor society is open to undergraduate students in the College of Arts and Sciences and the Schools of Education, Journalism and Mass Communication, and Business Administration. The following students are eligible for membership:

A. Students who have completed at least 75 semester hours of graded course work at UNC-Chapel Hill with a quality point average of at least 3.750.
B. Students who have completed at least 105 semester hours, which include at least 45 semester hours of graded course work taken at UNC-Chapel Hill, with a quality point average of at least 3.600.

No grades made at an institution from which a student has transferred shall be included in determining a student's eligibility. The quality point average shall include all academic course work taken and counted toward the candidate's degree. Physical activity courses and grades are not included and grades received on courses taken after the candidate has received his or her degree shall not be counted.

Policy on Credit for Internships - The College of Arts and Sciences

No internship automatically earns academic credit. Students may seek credit for internships in two ways:

A. Through consultation with the Director of Undergraduate Studies in their major department; (for course credit in the department);
B. through consultation with the Director of Special Studies, 3rd floor Steele Building. (For credit for SPCL91P-4.)

Students are eligible to receive credit for an internship through SPCL 91P-4 if they meet the following criteria:

A. they have a GPA of 2.5;
B. their internship has been approved by the Coordinator for Experiential Learning Programs (211 Hanes Hall) and they have worked with this office to complete a learning contract in the semester before they do the internship. The deadline for completing paperwork for an internship is two weeks before the last class day of the semester preceding the internship.

Students who have completed the preliminary paperwork may sign up for 3 or 6 hours of SPCL 91P-4 for a PS/F grade only, in the semester following the internship.

Special Studies for Credit

The University offers a variety of internship experiential learning and special study opportunities for undergraduates. Variable amounts of credit up to six hours per semester and twelve hours total for graduation may be taken for graded credit. For Special Studies 90 and 91, no more than a maximum of seven hours may be taken for PS/D - /D/F grade.

Students may participate in either formalized programs such as UNITAS or the N.C. Fellows leadership program (Division of Student Affairs), or may make individualized contracts for work under the supervision of a member of the permanent faculty.

Interested students should see the Assistant Dean in charge of registration for these programs in the Arts and Sciences Advising Office at 314 Steele Building. Certain restrictions apply. For example, participation in the Student Government Tutoring program is limited to six hours of credit for two semesters.

Academic Departments and Schools

Academic Departments

All undergraduate courses usually offered in the regular sessions of the University are listed in the following section except courses in the schools of Business Administration, Education, Journalism and and Mass Communication, the School of Public Health's undergraduate degree programs, and the School of Medicine's Department of Medical Allied Health Professions. Please refer to sections elsewhere in this catalog for information about those courses.

The following section does not include courses offered by the professional schools of Law, Medicine, Dentistry, Nursing, Pharmacy, and Social Work. For courses in those schools, see special bulletins from those schools.

Although the Summer School offers many of the courses described here, the Summer School publishes a separate bulletin of specific course offerings.

The requirements for majors and minors are shown in connection with the materials concerning the various departments.

The work of the University is arranged and offered on the semester system, the regular session being divided into two approximately equal parts called the fall and spring semesters. The Summer School is divided into two sessions.

Work is valued and credited toward degrees by semester hours, one such hour usually being awarded for each class meeting a week for a semester. One hour of credit is usually awarded for each three hours of laboratory or field work or work in studio art. In the following lists of courses, the numbers in parentheses after the descriptive titles show the credits allowed in semester hours.

Curriculum in Administration of Criminal Justice

Richard J. Richardson, *Chair*

This curriculum was closed to new majors in 1991.

The Curriculum in Administration of Criminal Justice is designed expressly for liberal arts students to afford them a philosophical and theoretical examination of leading concepts of law and justice - the nature of crime and the institutions through which we endeavor to deal with it, the working of legal institutions, the role of law and its administration in civil society, and the problems of change in the legal system.

The Curriculum is multidisciplinary, drawing from the resources of the humanities and the social sciences. Few of the required and suggested courses provide extensive legal training, as such, although the student is provided a broad background for the study of law or entry into such professional fields as law enforcement and corrections. The primary goal is to contribute to the general education of undergraduates.

Bachelor of Science in Administration of Criminal Justice

1. *General College.* All General College requirements must be met. The following required courses should be taken during the freshman or sophomore years:

POLI 4	Introduction to Government in the United States
POLI 45	The Nature and Function of Law
SOCI 23	Crime and Delinquency

An introductory course in statistics
(STAT 11, STAT 23, PSYC 30, ECON 70, or SOCI 52)

Other General College courses which are *recommended* (not required) include:

ECON 10, ENGL 30 or 32, PHIL 22, PSYC 10, and PSYC 28.

2. Junior-Senior General Education. All general education requirements for the BA must be completed.
3. Major. Seven courses must include at least one course and no more than three courses from each of three groups.

Group A - Systems of Laws:

BUSI 140	Legal Environment of Business
BUSI 144	Business Law
CLAS 115	Roman Law
HIST 157	American Constitutional History to 1876
HIST 158	American Constitutional History since 1876
JOMC 164	Mass Media Law and Ethics
POLI 155	The Constitution of the United States
POLI 157	Civil Liberties Under the Constitution
POLI 159	(ADJU 101) Criminal Law Development and Administration
POLI 176	International Law
POLI 177	Administrative Law

(Either HIST 157 or POLI 155 is required of each student. Students may not take both of these courses, nor may they take both HIST 158 and POLI 157.)

Group B - Legal Institutions and Processes:

ECON 167	Crime and Microeconomic Decision-Making
POLI 151	(ADJU 100) The Adversary System of Criminal Justice
POLI 152	(ADJU 102) Law Enforcement in a Democratic Society

POLI 153	Constitutional Policies and the Judicial Process
POLI 158	(ADJU 103) The Problems of Change in Correctional Administration
SPCH 65	Legal Argumentation
SPCH 85	Communication in the Criminal Justice System
ADJU 106	Internship

(POLI 151 (ADJU 100) is required of each student.)

Group C - Theories of Law and Justice:

ANTH 124	Law, Culture and Society
ECON 166	Crime and Criminal Justice: An Economic Approach
PHIL 41	Morality and Law
PHIL 113	Philosophy of Law
POLI 156	(ADJU 104) Seminar in Law and Justice
SOCI 124	Sociology of Law
SOCI 130	Sociological Criminology
SOCI 141	Social Deviance
SPCH 81	The Philosophy and Ethics of Legal Communication

100 The Adversary System of Criminal Justice (Political Science 151) (3). Focuses upon the political, legal and administrative problems encountered in the actual operation of the American System of Criminal Justice as affected by the adversarial nature of its processes. Fall and spring.

101 Criminal Law Development and Administration (Political Science 159) (3). Analysis of problems in defining, invoking and administering criminal law as a governmental process. Spring.

102 Law Enforcement in a Democratic Society (Political Science 152) (3). Deals with the development and current functioning of law enforcement agencies in the United States, legal and practical issues involved in the exercise of police discretion, judicial supervision of law enforcement activities, police-community relations, the impact of technological change and research on law enforcement, contemporary practices and future possibilities respecting functional improvements on law enforcement. Fall.

103 The Problems of Change in Correctional Administration (Political Science 158) (3). An analysis of the political, legal and administrative problems involved in effecting changes in correctional administration. Fall. Staff.

104 Junior/Senior Seminar in Law and Justice (Political Science 156) (3). Advanced topics of varying focus, taught in seminar format for students who have completed appropriate background. Permission of the instructor is required. Fall or spring. Staff.

106 Internship (3 - 6). With permission of the Chair. Fall and spring. Staff supervision.

Department of Aerospace Studies

M. Smiley, *Lt. Colonel, USAF*

The Department of Aerospace Studies (Air Force ROTC) has been an integral part of the University's tradition of scholarship, excellence, and achievement since 1952. As the University accelerates into its third century of excellence as the nation's oldest state university, the Air Force will continue to be a major contributor in helping UNC- Chapel Hill and its alumni command the future. UNC- Chapel Hill, in turn, will continue to be a major contributor of outstanding leaders in defense of our country and way of life.

The Air Force Reserve Officer Training Corps (AFROTC) program provides both undergraduate and graduate students many opportunities. These opportunities include academics, scholarships and financial assistance, applied professional training, job placement, and some unique extracurricular activities. In many ways AFROTC is more than a department in the College of Arts & Sciences. It is also a professional organization designed to provide interested students growth and development opportunities beyond the classroom. Anyone interested in AFROTC can call the department at 962-2074/8035.

AFROTC Program

General

Undergraduate students can enter the AFROTC program anywhere between the beginning of their freshman year and the end of their sophomore year. Graduate students can enter anytime, but must have at least two years of full-time study remaining at the university. Application for entry into the AFROTC program is open to all university students without discrimination. Anyone accepted into the program can participate fully in all aspects without any obligation to the Air Force, up to their last two years of study.

Anyone desiring an officer's commission in the Air Force upon graduation must complete at least the last two years of our program. Completion of these last two years requires an obligation to serve in the Air Force as a commissioned officer, 2nd Lieutenant, upon graduation. Usually this commitment is only four years, but can be longer in professions requiring extended special training, as in the case of pilot and navigator.

The only requirements for being accepted into the program during the initial two years are being a U.S. citizen and having a minimum GPA of 2.0. Entry into the last two years is more competitive and is based primarily on your GPA, medical qualifications, and score on the Air Force Officer's Qualification Test.

Facilities

The University has provided excellent facilities in Chase Hall for the dedicated use of students in the AFROTC program. These include a small library, quiet study areas, a large student lounge with a kitchen, and classrooms.

Academics

The academic portion of the AFROTC program consists of eight courses (reference section on Curriculum below), each with an associated lab period. All courses count as elective undergraduate credit.

The first two years of the program are referred to as the General Military Course (GMC) and are designed to introduce an interested student to the Air Force. These introductory level classes meet once a week for an hour, with a 75-minute lab once a week. A student can enter, as well as leave, AFROTC at any point while in the GMC.

The second two years are referred to as the Professional Officer Course (POC) and are designed to prepare an individual to become a commissioned officer (2nd Lieutenant) in the Air Force. These upper level courses meet three times a week for an hour, with a 75-minute lab once a week. Entry into the POC is competitive. Once accepted, a student is obligated to serve in the active duty Air Force upon graduation. Acceptance not only involves the Air Force accepting the student, but also the student accepting the Air Force. (Reference section on Guaranteed Job Placement below).

Scholarships & Financial Assistance

Any student can apply for a 4, 3.5, 3, 2.5, or 2 year scholarship. These scholarships cover full tuition, books, fees, and provide a $100 per month tax-free allowance. Scholarships are available for technical and nontechnical degrees. There are approximately 15 - 20 students attending UNC-Chapel Hill via AFROTC scholarships in any one year.

There are also specialty scholarships for nursing and premed students. Nursing scholarships are for 2 or 3 years and provide the same support as above. If accepted for a premed scholarship, the support is as above with the added feature that you are guaranteed acceptance into the Armed Forces Health Profession Scholarship Program (AFHPSP) once accepted into a medical school. AFHPSP pays for all your medical school, plus a $500 per month allowance, and provides unique limited clinical practice opportunities, for which you receive full pay and allowances as a 2nd Lieutenant.

Nonscholarship students accepted into the POC are also given a $100 per month tax-free allowance.

Applied Professional Training

The activities listed below are available during the summer of a student's sophomore or junior years. Each student receives various pay and allowances, depending on the situation, while attending each activity. Travel, room, and board are also provided by the Air Force.

Light Aircraft Training: 4 weeks flying training/ screening for pilot candidates

Professional Development Program: 2 weeks working directly with an experienced commissioned officer at an active duty base in a career field of interest to the student

British Exchange: 2 weeks in England working with their university's AFROTC-like unit and the Royal Air Force

Strategic Defense Initiative Organization: 6 weeks working with the SDI offices at the Pentagon

Cadet Training Officer: 4 - 6 weeks as a field training instructor at various locations all over the U.S.

Airborne Training: 3.5 weeks at the Army Airborne School

USAF Academy Parachute Training: 2 weeks free-fall training in Colorado Springs, CO

Field Training: 4 - 6 weeks leadership training at various camps around the country

Guaranteed Job Placement

Prior to entering the POC and obligation to the Air Force, each applicant will be guaranteed a job (i.e., pilot, navigator, nurse, lawyer, or missile control) or job category (i.e., technical or nontechnical). This process is based on the needs of the Air Force and the desires of the student.

Once accepted into the POC, the AFROTC staff begins working individually with each student to refine aptitude and desires for type of job, any additional professional training, and geographic area.

Extracurricular Activities

The AFROTC experience is a lot more than just classroom studies. There is a wide range of other activities in which our students participate. These include Arnold Air Society, formal dinners and dances, colorguard at major university athletic events, regional intramural athletic events, field trips to military facilities around the country, arranging for and escorting recognized guest speakers, and publishing our own newspaper, the RAMJET. Our students also hold a number of seasonal parties and fund raising events.

Arnold Air Society (AAS) is a national professional society dedicated to furthering the traditions, purposes, and concepts of the U.S. Air Force as a military organization and a professional calling. AAS also maintains the close relationship between AFROTC cadets and the active Air Force. As a national award winner, our local AAS chapter is active nation-wide and attends the national convention each year. Associated with Arnold Air Society are the Silver Wings. The Silver Wings is a group dedicated to supporting the ideals of the Arnold Air Society. Although they are not "officially" in the AFROTC program or obligated to the Air Force, the Silver Wings are a special part of AFROTC and the role it plays is an integral part of university life. They, on their own and with the cadets, perform a lot of civic and charity work in the local community. The Carolina Silver Wings are also national award winners.

Curriculum

General Military Course (GMC)

(NOTE: Students entering AFROTC as juniors complete the equivalent of the freshman and sophomore year course work at a summer camp, during which they are paid a salary. Travel, as well as room and board, is provided by the Air Force.)

Freshman Year

AERO 11a. U.S. Air Force Today (1). An introduction to Air Force organization, mission, doctrine, offensive, and defensive forces. There is one lecture per week. Fall. Staff.

AERO 11b. U.S. Air Force Today (1). Examines the role of strategic, general purpose, and aerospace support forces in national defense. There is one lecture per week. Spring. Staff.

Sophomore Year

AERO 12a. Growth and Development of Air Power (1).
An historical survey of the development of air power from its earliest beginnings through World War II. This course focuses on the changing nature of military conflict and the evolution of air power doctrine and concepts. It includes an assessment of oral communicative skills through classroom presentations. There is one lecture per week. Fall. Staff.

AERO 12b. Growth and Development of Air Power (1).
A study of US air power from 1947 to present. The primary focus is the history of the United States Air Force, and the growth and development of air power as an element of national security. The course also surveys the national defense establishment. It includes an assessment of oral communicative skills through classroom presentations. There is one lecture per week. Spring. Staff.

AERO 31L. Leadership Laboratory (0). (Freshmen and Sophomores) Required for all AFROTC GMC students. This laboratory is conducted by the cadet corps and involves career opportunities in the USAF, life and work of the USAF junior officer, and military ceremonies. There is one period per week. Fall and spring. Staff.

Professional Officer Course (POC)

Junior Year

AERO 57. Contemporary Leadership and Management (3).
This is the first part of a two-part course concerning contemporary leadership and management. Emphasis will be on modern-day experiences, successes, and failures, with various theories on how to motivate people, organize, and manage. Lectures and discussion focus on application of various principles as an Air Force officer. Class participation, comprehension, and oral communication skills will be stressed. Staff.

AERO 65. Contemporary Leadership and Management (3).
This is the second part of the course described above. Class participation, comprehension, and written communication skills will be stressed. There are three lectures per week. Staff.

Senior Year

AERO 149. National Security Affairs and Defense Policy (3).
A survey and analysis of national security affairs, defense policy, and the role of the military. Emphasis is on current trends and dynamics domestically and internationally, and what they may mean for the future. Lectures and discussion will center on gaining insight on the issues facing military officers today and the near future. Class participation, comprehension, and oral communication skills are stressed. There are three lectures per week. Fall. Staff.

AERO 51. The Military and Contemporary Society (3). A survey and analysis of the major issues concerning the military in our society today and the near future. Emphasis will be mostly on domestic issues concerning the existence of a military in peace and war, perceptions/misperceptions of the military as individuals and as an organization, and the impact of defense spending and policies. Lectures and discussions will center on gaining insight to these issues as a military officer today and the near future. Class participation, comprehension, written, and oral communication skills will be stressed. Spring. Staff.

AERO 71L. Leadership Laboratory (0). (Juniors, Seniors) One laboratory per week is required for all AFROTC students. Fall and spring. Staff.

Desideratum Courses

In addition to the above courses students in the AFROTC program are required to complete the following desideratum courses.

GMC	Either Political Science 52, Political Science 86, History 18, or Philosophy 84 in their freshman or sophomore year.
POC	Juniors: Philosophy 22 or 42.
Seniors	History 69, History 89, History 144, History 152, Political Science 150, or Political Science 151.

Curriculum in African Studies
Curriculum in Afro-American Studies

Julius E. Nyang'oro, *Chair*. Faculty: Roberta Ann Dunbar, Perry Hall, Kenneth Janken, Catharine Newbury, Julius E. Nyang'oro, Jon Michael Spence. *Advisory Committee:* Professors: Bernard Boxill, Craig Calhoun, John Hatch, Genna Rae McNeil, Maria Tsiapera; Associate Professors: James Gadson, Wilbert Gesler.

The undergraduate Curricula in African Studies and Afro-American Studies are interdisciplinary programs leading to the B.A. degree. They are administered through the College of Arts and Sciences. Prospective majors should see the Curriculum Chair.

The aim of the curriculum is to enable students to examine the experiences of Afro-Americans and the cultures of Africa. The diversity of these experiences and cultures requires interdisciplinary study, but it should be noted that both curricula require students to emphasize one field of study, so that they will have a substantial disciplinary background from which to approach the varied materials of either curriculum.

The intention of the Afro-American Studies major is to help the student understand: (1) The continuities that exist for Afro-Americans between the African cultures of their ancestors and the cultures of the Americas; (2) the history of Afro-Americans and their contemporary situations; (3) the form and meaning of the artistic expression of Afro-Americans; and (4) the similarities and distinctions between majority and minority groups in America and the forms of interaction between those groups.

The African Studies major is intended to help the student understand such matters as the history, geography, languages, politics, and arts of that continent. Some attention will be paid to the relationships between Africa and the Americas, but the chief purpose of the curriculum is to acquaint students with Africa; hence, this course of study is distinct from the Afro-American curriculum.

AFRI 40 and AFAM 40 or 41 are required beginning courses for African Studies majors. AFRI 40 and AFAM 40 and 41 are required beginning courses for Afro-American Studies majors.

Bachelor of Arts with a Major in African Studies

In the General College: all General College requirements must be met; a modern foreign language is required. Prospective majors are encouraged to include AFRI 40 and AFAM 40 or 41 in the General College program.

In the College of Arts and Sciences: Core courses are listed below. In addition, the concentration requirement requires that core courses and electives must include at least four courses from a single discipline or professional school, one of which must be a course in methodology. Students will work in close consultation with their adviser to fulfill this aspect of the program. Students must earn at least 18 hours of C or higher in the core courses.

Core requirements: AFRI 40, AFAM 40 or 41, AFRI 62, AFRI 64, AFRI/AFAM 174, HIST 38 or 39, ANTH 26 or POLI 59.

Electives: elective courses should be selected in consultation with the faculty adviser. Students will be encouraged to select 6 additional hours from courses offered by the Curriculum; e.g., AFRI 60, 61, 70, 90, AFRI/AFAM 170, 174, AFRI 190; and advanced courses in other disciplines which may also count as partial fulfillment of their discipline requirement; e.g., HIST 78, 79, 193, 195, POLI 60, 130, ANTH 126, 133, SOCI 129. Other electives will be chosen to complete the discipline concentration.

Bachelor of Arts with a Major in Afro-American Studies

General College: all General College requirements must be met. Prospective majors are encouraged to include AFRI 40 and AFAM 40 and 41 in their General College program.

Core requirements (27 hours): AFRI 40; AFAM 40; AFAM 41, AFAM 60, AFAM 70, AFRI/AFAM 174; HIST 165 or 166 or 21 or 22, ENGL 84 or 85; one course in the Social Sciences, to be chosen from AFAM/ EDFO 115, POLI 171, SOCI 22, SOWO 106, PSYC 142. Any substitutions for these must be authorized by the Curriculum director.

Other required courses (12 hours): a minimum of four courses from a single discipline or professional school is required. Students will work in close connection with their adviser in the Curriculum to fulfill this aspect of the program.

Elective courses: these courses will be selected by students in consultation with their faculty adviser. Students are encouraged to select at least 6 hours from courses offered in the Curriculum such as AFAM 58, 64, 65, 67, etc., and advanced courses in other areas which may serve to strengthen their disciplinary concentration.

Majors in this Curriculum must earn a C or higher (not a C average) in at least 18 hours of core courses.

Minor in African Studies

The undergraduate minor in African Studies shall consist of five (5) courses as outlined below:

AFRI 174	AFRI 40: Introduction to African Civilization
AFRI 62	African Literature
AFRI 65	Political Processes and Economic Development in Africa
AFRI 66	Contemporary Africa: Issues in Health, Population, and the Environment
AFRI 174	African and Afro-American Linkages

Depending on the relationship between a student's major and the African Studies minor, a student may be permited to substitute AFRI 61, AFRI 63, AFRI 64, or AFAM 40 for one of the course requirements listed above. A substitution will be allowed only with the approval of the student's faculty adviser in African Studies and with the permission of the Curriculum chair. The Curriculum recommends that those who choose African Studies as a minor take Afro-American Studies 40, either as part of the African Studies minor or in addition to it. However, students cannot use AFAM 40 to satisfy both the requirement for the African Studies minor and the pre-1700 western history requirement in the historical/comparative perspective for the General College.

Studies shall consist of five (5) courses as outlined below.

Four required courses:

AFAM 174	AFAM 40:The Black Experience (I)
AFAM 41	The Black Experience (II)
AFAM 60	Junior Seminar in Afro-American Studies
AFRI 40	Introduction to African Civilization.

the following list and in consultation with the student's faculty advisor in the Curriculum in Afro-American Studies:

AFAM 174	African and Afro-American Linkages
AFAM 58	The Civil Rights Movement
AFAM 67	Afro-American Leadership Styles
ENGL 84	Afro-American Literature to 1950
ENGL 85	Afro-American Literature since 1950
HIST 165	History of Afro-Americans to 1865
HIST 166	History of Afro-Americans, 1965 to Present.

The student who selects Afro-American Studies as a minor should choose the fifth course requirement in consultation with his or her faculty adviser in the Curriculum in Afro-American Studies.

African Studies 40. Introduction to African Civilization. (3). Introduction to principal features of African civilization through examination of geopolitical context; historical themes; and selected social, political, economic, religious, and aesthetic characteristics of both traditional and modern Africa.

African Studies 60. Topics in African Studies (3). A seminar for junior majors in the curriculum and others with some background in the study of Africa. Discussion and research papers on one topic selected for emphasis each semester; e.g., urbanization, literature, etc. Staff.

African Studies 61 (WMST 61) African Women: Changing Ideals and Realities (3). Introduction to recent literature, theoretical questions, and methodological issues concerning study of women in Africa. Topics include women in traditional society, impact of colonial experience and modernization on African women.

African Studies 62. African Literature (3). Introduction to the traditional and modern literature of Africa. Works studied include traditional poetry and the epic as well as examples of the poetry, drama, and fiction of contemporary anglophone and francophone writers.

African Studies 63. African Belief Systems: Religion and Philosophy in Sub-Saharan Africa (3). The relationship between religion and society in Sub-Saharan Africa is explored through ethnographic and historical readings. The Nilotic, Bantu, and West African religious traditions are examined in detail.

African Studies 64. African Art and Culture (3). Introduction to the plastic arts of Sub-Saharan Africa through study of their relationship to the human values, institutions, and modes of aesthetic expression of select traditional and modern African societies.

African Studies 65. Political Processes and Economic Developments in Africa (3). A seminar that critically examines the historical and theoretical basis of the state's centrality in economic development in African countries. Relevant case studies drawn from Sub-Saharan Africa. Fall, spring.

African Studies 66. Contemporary Africa: Issues in Health, Population, and the Environment. (3). A seminar that introduces students to non- western perspectives and comparative study of ecological, social and economic factors that influence the welfare of contemporary African communities. Examination of famine, population growth, and health issues within the context of African cultural and social systems.

African Studies 70. Policy Problems in African Studies (3). A seminar for senior majors and others with some background in the study of Africa. Lectures, readings, and research projects on one problem each semester concerning policy formation by African leaders or on U.S.-Africa policy issues.

African Studies 90. Independent Studies (3). Independent study project designed particularly in conjunction with overseas study. Staff.

African Studies 120. Contemporary Southern Africa (PWAD 121) (3). Prerequisite, AFRI 40 or equivalent. Study of the history, politics and economic development of Southern Africa in the twentieth century. Nyang´oro.

African Studies 121. East African Society and Environment (3). Prerequisite, AFRI 40 or equivalent. Study of the history, politics and economic development of Kenya, Uganda and Tanzania in the twentieth century. Nyang´oro.

African Studies 122. West Africa: Society and Economy in the Twentieth Century (3). Prerequisite, AFRI 40 or equivalent. Interdisciplinary course on twentieth century West Africa. Topics vary but are likely to include demography and health, gender, urbanization, labor, religion and politics, and education. Dunbar.

African Studies 123. Central Africa: The Politics of Development (3). Prerequisite, AFRI 40 or equivalent. Study of the postcolonial political economies of central African states, with emphasis on the state's role in development, the changing character of state/society relationships (including recent pressures for democratization); and the local impact of regional and global external linkages. Newbury.

African Studies/Afro-American Studies 170. African Afro-American Cultural Heritage (3). For advanced undergraduates and graduate students. An examination of themes, particularly in the domain of the arts, of African and Afro-American heritage.

African Studies/Afro-American Studies 174. Key Issues in African and Afro-American Linkages (3). For advanced undergraduates and graduate students. This course is intended to explore theoretical and methodological issues concerning the historical linkages between African and Afro-American peoples.

African Studies/Afro-American Studies 190. Independent Studies (3). Independent study projects defined by student and faculty adviser for advanced undergraduate and graduate students. Staff.

Afro-American Studies 9 (Education 9) Freshman Seminar (3). Small group interaction with contemporary human and race relations as focus for study and discussion. Emphasis on increasing personal and racial awareness aimed at enhancing and improving relationships between students with varied racial and ethnic backgrounds.

Afro-American Studies 40. The Black Experience (3). An interdisciplinary course designed to provide a broad survey of the Black experience in the Americas with special emphasis on the sixteenth, seventeenth and eighteenth centuries.

Afro-American Studies 41. The Black Experience (3). An interdisciplinary course designed to provide a broad survey of the Black experience in the Americas with special emphasis on postemancipation developments.

Afro-American Studies 55. Afro-American Political Philosophy (3). A philosophical examination of the writings of African Americans on slavery, racism and discrimination. Among the main figures to be studied are Martin Delany, Frederick Douglass, Booker T. Washington, W.E.B. DuBois, Marcus Garvey and Martin Luther King. Fall, spring.

Afro-American Studies 58. The Civil Rights Movement (3). An examination of the struggle by Black Americans for social justice since World War II and of the systemic responses.

Afro-American Studies 60. Junior Seminar (3). An examination of the principal historical, philosophical and research issues underlying Afro-American Studies. Emphasis on the theoretical and methodological concerns related to the conduct of research on Afro-American peoples. Spring.

Afro-American Studies 62, 63. Foundations of Black Education (3 each). The first semester deals primarily with sources of education for slaves and free Blacks before the Civil War while the second semester addresses policy considerations underlying public education for Blacks since the Civil War.

Afro-American Studies 64. Blacks in Urban Politics (3). An analysis of the phenomenon of the increased political activity of Black Americans during the past two decades with special emphasis on the nature and implications of inner city politics.

Afro-American Studies 65. Topics in Afro-American Studies (3). Intensive analysis of a selected topic related to the black experience. Topic will vary with the instructor.

Afro-American Studies 66. Black Women in America (3). An examination of the individual and collective experiences of Black women in America from slavery to the present and the evolution of feminist consciousness.

Afro-American Studies 67. Afro-American Leadership Styles (3). From a vast array of leadership styles students are expected to research a major figure and analyze his or her leadership behavior. Studies will examine critically the ideological and programmatic responses of Black leaders to the socio- politico-economic problems of Black people.

Afro-American Studies 70. Senior Seminar (3). Interdisciplinary in nature, the seminar will focus on a common theme in Afro-American Studies. Historical and current perspectives of the theme will be explored. A major research paper is expected. Fall.

Afro-American Studies 71. Field Research in the Black Experience (3). Individual research and practicum. Registration by permission of the instructor.

Afro-American Studies 72. Social Organization of Black Community (3). An intensive analysis of the formal and informal social institutions in black communities, North and South, urban and rural.

Afro-American Studies 73. Blacks and Criminal Justice (3). An examination of the problems of Black Americans as they relate directly to criminal justice.

Afro-American Studies 94. Black Arts and Black Aesthetics (3). The concept of the black aesthetic as it is manifested in black American performing, visual, literary, and musical arts.

Curriculum in American Studies

Townsend Ludington, *Chair*. Faculty: Professor: Joy Kasson. Adjunct Professors: Arthur S. Marks, Art; Everett Emerson, Philip Gura, Trudier Harris, Richard Rust, David Whisnant, English; Peter Filene, John Kasson, Donald Mathews, History; John S. Reed, Sociology; Associate Professor: Margaret O'Connor, English; Adjunct Assistant Professor: Charles Capper, History; Adjunct Assistant Professor: Annette Cox, Humanities Program.

The Curriculum in American Studies, an undergraduate program leading to the Bachelor of Arts degree, offers students an opportunity to examine American culture from a variety of perspectives. Works of history, literary and artistic expression, social and political analysis are studied with the aim of discovering interrelationships among different aspects of our culture.

Bachelor of Arts with a Major in American Studies

Regular Concentration Requirements

General College: HIST 8H, HIST 22, or AMST 20 AMST 20 is a General College course designed to introduce freshmen and sophomores to issues of American culture. It meets one of the requirements for Perspective V (Western Historical/ Non-Western Comparative Perspective). It has also been approved for the upper level B.A. perspective (majors cannot use this.)

Core Courses: 8 courses
AMST 40
AMST 60 or 61 or 62 or 63
AMST 80 or 100

Literature: One of the following: English 81, 82, 83

Ideas: One of the following: PHIL 59, RELI 68, POLI 62, 155, 162, HIST 154, 155

Arts: One of the following: ART 43, MUSC 45, 135, ENGL 146, 147, 187, HIST 156

Social Cultures & Subcultures: One of the following: HIST 65, 72, 161, 162, 163, 164, 167, 168, ANTH 105, 130, POLI 136, 171, SOCI 15, 22, GEOG 149, 154, RELI 149

Afro-American Culture: One of the following: AFAM 40, 41, 72, ENGL 84, 85, 184, 189, HIST 165, 166

In addition, students are required to fulfill four of five Arts and Sciences Perspectives requirements.

Southern Studies Concentration Requirements

General College: HIST 8H, HIST 22, AMST 20

Core Courses: 8 courses
AMST 40
AMST 60 or 61 or 62 or 63
AMST 80 or 100
ENGL 88
HIST 163
HIST 164

Southern culture: One of the following: ANTH 105, GEOG 161, POLI 136, SOCI 15

Afro-American culture: One of the following: AFAM 40, 41, 72, ENGL 84, 85, 184, 189, HIST 165, 166

Four Arts and Sciences Perspectives requirements.

Minor in American Studies

The undergraduate minor in American Studies consists of five courses and one prerequisite course at the General College level.

Prerequisite course: One of the following:

HIST 8H	Honors in American History Since 1865
HIST 22	American History Since 1865
AMST 20	The Emergence of Modern America

Five required courses:
AMST 40
AMST 60, 61, 62, and 63
AMST 80 or 100

And two from the following:
Literature: ENGL 81, 82, 83

Ideas: PHIL 59, RELI 68, POLI 62, 155, 162, HIST 154, 155

Arts: ART 43, MUSC 45, 135, ENGL 146, 147, 187, HIST 156

Social Cultures & Subcultures: HIST 65, 72, 161, 162, 163, 164, 167, 168, ANTH 105, 130, POLI 136, 171, SOCI 15, 22, GEOG 149, 154, RELI 149

Afro-American Culture: AFAM 40, 41, 72, ENGL 84, 85, 184, 189, HIST 165, 166

20 The Emergence of Modern America (3). Interdisciplinary examination of two centuries of American culture focusing on moments of change and transformation. Lecture and discussion. Fall and spring. J.S. Kasson.

34H Defining America (3). An interdisciplinary course for junior-senior honors students that considers what it has meant to be "American" from colonial times to 1865. Fall.

35H Defining America (3). An interdisciplinary course for junior-senior honors students that considers what it has meant to be "American" during the period 1866 to present. Spring.

40 Introduction to American Studies (3). Permission of the Chair required. A study of interdisciplinary methods and the concept of American Studies. Fall and spring.

60 - 63 American Studies Junior Seminar (3). Permission of the Chair required. Special studies in American studies. Fall and spring.

80 American Studies Senior Seminar (3). Permission of the Chair required. Studies of American topics from a broad cultural perspective. Fall and spring.

90, 91 Honors in American Studies (3 each). Directed independent research leading to the preparation of an honors thesis and an oral examination on the thesis. Required of candidates for graduation with honors in American Studies. Fall and spring.

96 Independent Study in American Studies (3). Permission of the Chair required. Directed reading under supervision of a faculty member. Fall and spring.

Department of Anthropology

Bruce P. Winterhalder, *Chair*

The Department's courses are intended to open systematic perspectives on the nature of humankind. This is accomplished by detailed studies of: (1) the physical and cultural origins and developments of human beings in general; (2) the differing patterns of culture in all parts of the present-day world; and (3) the interrelationships between human beings' physical and cultural nature and their various reactions to change in the 20th century.

Although the Department offers major programs leading to the B.A., M.A., and Ph.D. degrees, its courses are also open to nonmajors, and for the most part they do not have any prerequisites. Those courses which do have prerequisites are specifically identified as such.

Courses that may satisfy the four subfield requirements include physical anthropology, ANTH 43, 62, 112, 114, 115, 116, and 117; archaeology, ANTH 100, 101, 110, 127, 131, 150, 151, and 168; sociocultural anthropology, ANTH 20, 26, 30, 36, 40, 42, 44, 45, 46, 47, 49, 50, 55, 105, 118, 120, 121, 123, 124, 125, 126, 129, 130, 132, 133, 134, 135, 136, 137, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 155, 163, 164, 165, 166, 167, 170, 172, 173, 174, 175, 176, 178, 185, 186, 188, 189, 194, and 196; linguistics, ANTH 171, 179, 180, 181, 183, 184, 190, and 193 (or their Linguistics Department equivalents), and LING 030A.

Undergraduate Major: Anthropology 41, 97, and seven other courses including at least one course from each of the four subfields of anthropology (physical anthropology, archaeology, sociocultural anthropology, and linguistics) but preferably not including anthropology 122; together with the appropriate Perspective courses and electives.

The undergraduate major can serve as the core of a general liberal arts education. It can also serve as an introduction to graduate work in anthropology and as an orientation for a variety of occupations in which knowledge of the behavioral sciences is either required or is highly desirable.

Honors in Anthropology: Students with an overall grade average of 3.2 or better are encouraged to apply for candidacy for the B.A. with honors. Honors candidates must meet the same course requirements as other anthropology majors. In their senior year, honors candidates take Anthropology 95 and 96 (these count as two of the three elective courses within the major taken in addition to Anthropology 41, 97 and one course each of the four subfields). Anthropology 95 and 96 provide the opportunity for independent study, research, and writing under individual faculty guidance.

Detailed information on the honors program can be obtained from the department's Director of Undergraduate Studies.

20 Anthropology Through Expressive Cultures (3). Introduction to cultural analysis and the anthropological point of view through analytic and interpretive "readings" of films, fiction, and ethnography. Emphasis on social conditions and native points of view. Spring. Farquhar.

26 The Peoples of Black Africa (3). Introductory ethnographic survey emphasizing the cultural diversity of indigenous African societies. Basic concepts used in analyzing African economics, political systems, marriage patterns and family organization, religious beliefs, etc. Fall. Daniels.

30 Primitive and Civilized Perspectives (3). Examination of the interplay between "primitive" and "civilized" cultural perspectives. In-depth focus on several "primitive" cultures examining relative affluence, environmental and social relationships, and comparing with U.S. society. Spring. Bachnik.

36 Introduction to Kinship and Social Organization (3). An introduction to basic concepts in the cross-cultural study of social organizations, with emphasis upon kinship, marriage and residence patterns. Fall. Staff.

40 Southern Style, Southern Culture (Folklore 40) (3). An anthropological journey into the world of Southern meaning, exploring the interdependent realms of work, worship, aesthetics, ethnicity, gender, and the politics of culture. Designed as an introduction to anthropology. Fall. Hinson.

41 General Anthropology (3). An introduction to anthropology, the science of humans, the culture-bearing animal. Topics considered: human evolution and biological variations within and between modern populations, prehistoric and historic developments of culture, cultural dynamics viewed analytically and comparatively. Fall and spring. Staff.

42 Folk Cultures in the Modern World (3). The customs and institutions of peoples in the Mediterranean area, Asia, Africa, and Latin America as they encounter technological and social development in the modern world. Fall. Staff.

43 Human Evolution and Adaptation (3). Ideas used in reconstructing human evolution and analyzing contemporary adaptations. The course includes paleoanthropology, prehistoric archaeology, analogies from animal behavior, and studies of human adaptation to diverse environments. Spring. Winterhalder.

44 Human Dilemmas (3). Contemporary dilemmas examined from a cross-cultural view, including racism, environment, population, war, gender role liberation, and personal freedom in technological societies. Staff.

45 Culture and Communications (3). Examines the concept of culture and its role in human interaction. Cases of interethnic misunderstanding, male- female miscommunication and confusions between lay persons and specialists are considered from this perspective. Spring. Holland.

46 The Evolution of Moral Consciousness: A Course in General Anthropology (3). An introductory course in general anthropology focusing on the development of moral consciousness. Western and non-Western patterns of thought and culture are compared and contrasted. The course has a strongly philosophical orientation. Fall. Evens.

47 Comparative Healing Systems (3). Explores the relationship between health, ecology, and culture, and studies the many ways of healing, using examples from several different cultures. Spring. Finkler. (GC nonwestern/comparative)

49 Introduction to Cultural Anthropology (3). An introduction to non-western cultures studied by anthropologists. Focuses on the cultural and social systems of three different cultures. Intertwined is a critical questioning of the notion of culture. Spring. Holland.

50 Anthropological Perspectives on the Third World (3). Anthropological perspectives on the underdeveloped world of Asia, Africa and Latin America. Focuses on the social organization and cultural strategies of the people undergoing "development." Spring. Nonini.

55 Introduction to the Civilization of India, Pakistan, and Bangladesh (3). The course reviews urban and rural ways of life and the transformation of culture following British rule. Islam, Buddhism, caste, family life, and values are examined as well as several ways of life and problems besetting the countries as they pursue national goals. Spring. Staff.

62 Population Anthropology (3). A survey course dealing with the interaction between biocultural phenomena and population dynamics including reproduction, migration, urbanization, population genetics and population planning. Fall. Leslie.

94A Development of Anthropological Ideas (3). Prerequisite, Anthropology 41. Review of selected cultural anthropologists and their predecessors to define recurrent as well as innovative perspectives with which they have viewed humans, culture, and society. Spring. Staff.

95 Honors Study (3). Open to honors candidates. Advanced survey of anthropology and critical analysis of leading theoretical ideas in the field. Fall and spring. Staff.

96 Honors Research (3). Open only to senior honors candidates. Special research in a selected field under the direction of a member of the Department. Fall and spring. Staff.

97 Directions in Anthropology (3). Open only to and required of anthropology majors in the junior year. Directions in the discipline and profession of anthropology as reflected in research issues and in academic and nonacademic roles for anthropologists. Fall. Yarnell.

99 Special Projects (Var.). Prerequisite, permission of the Chair of the Department. Reading or research under the guidance of a faculty member whose interests coincide with those of the individual student. Fall and spring. Staff.

100 World Prehistory (3) A course designed to provide anthropology majors and other students of comparable social science or humanities background with an understanding of the global scale evolution of human culture. Spring. Crumley.

101 Prehistory of the Far East (3). A course designed to acquaint anthropology majors and upperclassmen from other fields with a general view of the prehistory of Siberia, China, Japan, and southeast Asia and Oceania. Spring. Brockington.

105 Anthropology of the South (3). Anthropological materials and insights bearing on modernization and other current trends in southern culture; research problems in the South. Fall. Peacock.

110 Principles of Archaeology (3). An examination of archaeology as a set of techniques and a subfield of anthropology, including history of archaeology, survey and excavation techniques, laboratories treatment of remains, archaeological analysis, historical and processual inference. Spring. Brockington.

112 Human Origins *(Anatomy 112) (Genetics 112)* (3). An introductory survey of physical anthropology, including the place of humans among the primates. Consideration is also given to osteology and the interrelationship of cultural and biological factors. Fall. Staff.

114 Human Osteology (3). Lectures and laboratory sessions will be devoted to an extensive examination of the human skeleton. Emphasis will be on analysis of skeletal material in the field and in the laboratory. Spring. Staff.

115 Human Genetics and Evolution *(Anatomy 115) (Genetics 115)* (3). Fundamental principles of genetics; population genetics; factors of evolution; race and species formation; evolution of primates and humans. Interaction of genetics and culture in human behavior, society, and evolution. Spring. Leslie.

116 Primate Social Behavior (3). Social behavior and ecology of prosimians, monkeys and apes and the evolution of human behavior. Fall or spring. Staff.

117 Evolutionary Perspectives on Human Adaptation and Behavior (3). Critical, partially historical discussion of evolutionary theories, including Darwinism, Neo-Darwinism, ethology and sociobiology, and their social-science analogs. Relevance and limitations of these theories for anthropologists will be focal. Fall: Winterhalder.

120 Culture Change and Underdeveloped Areas (3). Theories and case studies of cultural change will be discussed. Problems of culture change in less developed areas of Asia, Africa and Latin America will receive particular attention. Fall. Staff.

121 Culture and Personality (3). Broad survey of methods and problems connected with studying personality features characteristic of tribes and modern nations, child training and personality, and the relationship of culture to mental illness. Spring. Daniels.

122 Cultural Anthropology *(Folklore 122)* (3). Not recommended for students who have had Anth. 41. Recommended for advanced undergraduates and graduate students who have little or no background in anthropology. A survey of anthropological approaches to the study of human culture and social behavior, with some emphasis on the relation of anthropology to other sciences. Fall. Staff.

123 Magic, Ritual, and Belief (3). An examination of the rationality of "magic and religious thought" in traditional societies. Some attention to scientific thought is included. Spring. Evens.

124 Law, Culture, and Society (3). Law and legal mechanisms in their cultural and social contexts. Historical and contemporary problems of "law and development" will be analyzed. Fall. Staff.

126 Africa: Peoples and Culture *(Folklore 126)* (3). Prerequisite, Anthropology 26 or 41, or 122, or permission of the instructor. Advanced ethnographic survey of cultures of sub-Saharan Africa, some emphasis on historical development of major African sociocultural systems; application of anthropological theories to Africa and uses of African data in development of such theories. Spring. Staff.

127 Aboriginal Cultures of Mexico and Central America *(Folklore 127)* (3). The development of Indian cultures of Middle America; culminating in such civilizations as the Aztec and Maya; archaeological and ethnohistorical data synthesized. Spring. Brockington.

128 African/Afro-American Cultural Heritage *(African and Afro-American Studies 170)* (3). (See African and Afro-American Studies 170 for description.) On demand. Staff.

129 Southeast Asia: Peoples and Cultures *(Folklore 129)* (3). A survey of cultures in Indonesia, the Philippines and mainland Southeast Asia. Traditional influences and the impact of major contemporary changes on societies of the area will be discussed. Spring. Peacock.

130 Native North American Cultures *(Folklore 130)* (3). A broad survey of the traditional lifeways and customs of Native North Americans, with some emphasis on the impact made by historical contacts with EuroAmericans. Current issues affecting Native American groups are also addressed. Fall or spring. Staff.

131 Archaeology of South America (3). The development of native South American cultures according to archaeological and early ethnohistorical records. Fall. Brockington.

132 Latin American Cultures *(Folklore 132)* (3). An ethnographic survey of the peoples of Latin America with emphasis upon the analysis of tribal and community organization. Fall. Finkler.

133 The Peoples of the Caribbean (3). A survey of Caribbean cultural development. Particular attention will be given to human ecology, population segments, metropolitan influences, and culture change. Fall. Staff.

134 Art and Culture *(Art 174, Folklore 134)* (3). Cross-cultural study of form, image, and meaning in painting, drawing and sculpture. Emphasis on the interrelationship of religion and art in selected prehistoric and contemporary sociocultural traditions. Spring. Johnson.

135 Consciousness and Symbols *(Folklore 135, CMPL 135)* (3). Symbolizing as exemplified in the arts, religions, languages, and world-views of various cultures. Emphasis is on the relation of symbolizing to social process, as analyzed by theorists such as Durkheim, Weber and Levi-Strauss. Fall. Peacock.

136 Kinship and Social Organization (3). Prerequisite, permission of the instructor. Intensive study of kinship and marriage systems through Australian, African, and Asian cases. Historical, functionalist, structuralist approaches, descent and alliance theories, and the relation of kinship to social organization and social structure. Spring. Bachnik.

137 Modern Cultures of the Middle East *(Folklore 137)* (3). Desert-oasis, ecological adaptations and communities; the peril-refuge dialectic with political structures, religions, kin groups, and the self; directly observed present-day behavior patterns, from Morocco to Afghanistan, are emphasized. Fall. Staff.

138 Landscape and Spatial Anthropology (3). Study of conceptions of nature and the natural environment within a variety of prehistoric, historic, and contemporary societies. Archeological and ethnohistoric emphasis on the symbolic meanings of religious and political spatial landscapes. Fall. Crumley, Johnson.

139 Environmental Anthropology (3). The general nature of interrelationships between people and environment; biological vs. cultural adaptation, archaeological evidence of ecologic relationships, adaptation in the ethnographic present, and environmental alteration will be examined. Fall. Yarnell.

140 Gender and Culture *(Women's Studies 140).* (3) Cross-cultural perspectives on the social uses of gender distinctions. Focus on women's lives outside the U.S. and Europe. Comparison with students' social context. Fall. Staff.

141 The Anthropology of Gender, Health and Illness (3). This course will explore the social and cultural patterns and practices that differentially influence health and illness among women and men. Spring. Finkler and staff.

142 Religion and Anthropology *(Folklore 142, Religious Studies 142)* (3). Religion studied anthropologically, as a cultural, social, and psychological phenomenon in the works of classical and contemporary social thought. Spring. Tyson, Peacock.

143, 144 Field Training in Anthropology (3 each). Supervised, on-site data collection and analysis. Students develop background knowledge and select research topic before leaving campus. Instructor's permission required. Staff.

146 Introduction to Folklore *(Folklore 146)* (3). (See Folklore 146 for description). Spring. Staff.

147 Self and Society in Japan (3). Prerequisite, one course on Japan; one upper-level course in Anthropology (sociocultural); or instructor's permission. An introduction to contemporary Japanese society focusing on organization of self and relationship of self to social community. Course proceeds through case examination of small-group contexts in different social strata. Fall. Bachnik.

148 Contemporary Japanese Business and Social Organization (3). Prerequisite, Anth 147, or one upper-level course in sociocultural anthropology, or one course on Japan. Introduction to postwar Japanese social organization focusing on large and small enterprise organization; international enterprises, education, enterprise and family; medicine and healing practices; postwar social and economic restructuring. Spring. Bachnik.

149 Anthropology and Marxism (3). Examination of major writings within the Marxist critical tradition which have illuminated central problems within anthropology as theoretical discourse and discipline, and introduction to recent important research in Marxist anthropology. Fall, Spring. Nonini.

150 Archaeology of North American Indians (3). The history of American Indian cultures from 10,000 B.C. to the time of the European invasion as reconstructed by archaeological research. Special emphasis on the eastern woodlands and the Southwest. Fall. Steponaitis.

151 Field School in Archaeology (6). Intensive training in archaeological field methods and techniques. Students participate in excavation, recovery, recording, and interpretation of archaeological remains; transit mapping, photography, flotation recovery and other research procedures. Summer. Steponaitis.

155 Method and Theory in Ethnohistoric Research *(Folklore 155)* (3). Integration of data from ethnographic and archaeological research with pertinent historic information. Familiarization with a wide range of sources for ethnohistoric data and practice in obtaining and evaluating information. Pertinent theoretical concepts will be explored. Fall. Crumley. (Alternate years).

160 Language of Africa *(Linguistics 160)* (3). Introduction to the languages of Africa, their distribution and classification, phonological and grammatical structures, sociolinguistics and political aspects, with illustrations from several representative languages. (Alternate years).

163 Psychological Aspects of Modernization (3). Exploration of patterns of psychological development experienced by persons undergoing modernization. Students will cooperate in comparing and analyzing life histories collected in non-Western as well as local settings. Spring. Peacock.

164 Foundations of Social Anthropology (3). Intensive study of theory in social anthropology, through use of standard ethnographic monographs on traditional societies, with emphasis on political dimension. Special attention given to the nature and problems of structural-functionalist explanation. Spring. Evens.

165 Economic Anthropology (3). An intensive study of the theoretical and empirical concerns of the subfield of economic anthropology. Cross-cultural analysis of tribal, peasant and modern economic formations. Fall. Nonini.

166 Intentional Culture Change (3). Study of social and cultural elements involved in deliberate reformulation of the way of life of communities. Problems of community development and human resources in anthropological perspective. Spring. Staff.

167 Urban Anthropology (3). Emphasis on the social systems and modernization processes of contemporary cities in the Third World. Also considered: problems and opportunities of American anthropologists studying American industrial cities. Spring. Staff.

168 Emergence of the State (3). Prerequisite, permission of the instructor. Integration of ethnohistoric, ethnographic, and archaeological data on the topic of state formation. Definitions of the state are analyzed and the determining factors relative to increasing cultural complexity discussed. Fall. Crumley, Nonini. (Alternate years.)

170 Medicine and Anthropology *(Folklore 171)* (3). An introduction to social and cultural aspects of illness and healing in a wide range of

societies. Examines alternative healing systems in the U.S. Especially relevant to premedical students. Fall. Finkler, Farquhar.

171 Sociolinguistics *(Linguistics 170)* (3). Survey of topics in the study of language in its social context: language varieties and functions, multilingualism, social dialects, implications for linguistic theory. Fall. Staff.

172 Cultural Factors in Population Planning (3). Prerequisite, permission of the instructor. Cultural factors bearing on the needs, ethics, design, and implementation of programs attempting to deal with population growth. Spring. Staff.

173 Anthropology of the Body and the Subject (3). Prerequisite, Anthropology 170 or permission of the instructor. Anthropological and historical studies of variation in cultural constructions of bodily experience and personal subjectivity are reviewed, with special emphasis on the genesis of the modern individual and cultural approaches to gender and sexuality. Spring. Farquhar.

174 Chinese World Views *(Religious Studies 174)* (3). An approach to Chinese history, literature, science, and society through an exploration of a few pervasive cultural themes. Chinese sources in translation and western anthropological and philosophical sources are used. Fall. Farquhar.

175 Ethnographic Method (3). Intensive study of and practice in many of the most commonly used anthropological data-collection techniques. Spring. Staff.

176 Self and Other in the Ethnographic Research (3). An examination of ethnography as an interactional research approach. The course examines the process of ethnographic research and learning through practice. Fall. Bachnik.

177 European Societies (3). This course explores many cultural factors and diverse peoples - non-greco-Roman as well as greco-Roman - that have formed the European identity from the earliest human occupation of Europe to present. Spring. Crumley. [BA Western Historical perspective.]

179 Introduction to General Linguistics *(Linguistics 100)* (3). (See Linguistics 100 for description.) Fall and spring.

180 Linguistic Phonetics *(Linguistics 120)* (See Linguistics 120 for description.) Fall.

181 Introduction to Historical and Comparative Linguistics *(Linguistics 101)* (3). (See Linguistics 101 for description.) Spring.

182 Contemporary Chinese Society (3). This course draws on recent sociological and anthropological research in the Peoples Republic of China, autobiography, film, and fiction, to explore contemporary Chinese society and culture. Spring. Farquhar.

183 Phonology I *(Linguistics 123)* (3). (See Linguistics 123 for description.) Spring.

184 Language and Culture *(Linguistics 184)* (3). The study of language in society and culture as it constrains, reflects, and is shaped by the sociocultural context. Spring. Holland.

186 Schooling and Diversity: Anthropological Perspectives. (3). Anthropological approaches to issues of schooling and cultural diversity, including their relationship to gender, race, and class. Critical review of theory and method in the study of the (re)production of these divisions. Spring. Holland.

188 Observation and Interpretation of Religious Action (3) *(Religious Studies 188, Folklore 188.)* Prerequisite, permission of the instructor. Exercises (including field work) in learning to read the primary modes of public action in religious traditions: sermons, testimonies, rituals, prayers, etc. Primary focus on construction and interpretation of texts from field observation. Spring. Peacock.

189 Sacred Spaces and Architecture (3). A cross-cultural survey of sacred places and architecture - mountains, caves, gardens, shrines, and temples. Emphasis on rituals of place-making and sacred geometry in buildings and the landscape environment. Fall. Johnson.

190 Introduction to Grammar: I *(Linguistics 130)* (3). (See Linguistics 130 for description.) Fall. Staff.

192 Linguistic Hybridization *(Germanic Languages 172, Linguistics 172)* (3). (See Germanic Languages 172 for description.)

193 Introduction to Grammar: II *(Linguistics 133)* (3). (See Linguistics 133 for description.) Spring. Staff.

194 Advanced Studies in Art and Culture *(Art 174) (Folk 134)* (3). Prerequisite, Anthropology 134 or permission of the instructor. Intensive study of selected topics and issues in the analysis and interpretation of prehistoric and cross-cultural art, architecture, and other aesthetic forms. Fall. Johnson.

195 Architecture and Culture (3). Cross-cultural survey of vernacular architecture and domestic houses in a variety of contemporary, historic, and prehistoric societies. Intensive study of the ideology of design forms, and the construction of place and symbolic spaces. Johnson.

196 The Gardens, Shrines, and Temples of Japan (3). The religious landscape and built environments of Japan. Attention to palace, courtyard, and teahouse architecture and gardens, with emphasis on Shinto shrines and the Zen Buddhist temple and garden. Spring. Johnson (B.A. level Aesthetic.)

199 Special Topics (4). Examines selected topics from an anthropological perspective. Course description is available in the departmental office. Fall and spring. Staff.

Curriculum in Applied Sciences

Thomas J. Meyer, *Chair*
Richard C. Jarnagin, *Associate Chair*

This curriculum is designed to prepare students for an active role in the exciting world of modern technology. It is directed toward students seeking a career in the sciences but having applied interests. Options are available in Computer Science and four selections in Materials Science; Biomedical Materials Science, Chemistry-Based Materials Science, Physics-Based Materials Science, and Polymer Materials Science. Each option leads to the degree of Bachelor of Science in Applied Science and prepares the student for an entry-level industrial position or for graduate study in one of the applied sciences.

The Computer Science option is oriented toward the design and operation of hardware devices for digital systems, in contrast with the Computer Science option of the Curriculum in Mathematical Sciences, which is directed toward the mathematical aspects of computer science. The Biomedical Materials Science option and the Computer Science option afford undergraduate training in major areas of biomedical engineering.

Course requirements for the Biomedical Materials Science option, the Chemistry-Based Materials Science option, and the Polymer Science option closely follow those of the B.S. in Chemistry curriculum through the sophomore year. Similarly, the Computer Science option and the Physics-Based Materials Science option closely parallels the

B.S. in Physics curriculum through the sophomore year. The spec–ific requirements are listed below. Students in the curriculum are encouraged to participate in undergraduate research.

Common Requirements
Chemistry 11, 11L, 21, 21L
Mathematics 31, 32, 33, 83
Physics 26, 27, 101, 102´
English 11, 12
Foreign Language (through level 3)
General College Perspectives (7 courses)
Applied Sciences Seminar 98

Additional Requirements
Biomedical Materials Science Option
Applied Science 141, 143, 144L, 161, 162L
Biology 11, 11L, 45[2], 52
Chemistry 41, 41L, 61, 62, 62L, 130, 181, 182[1]
Physics 28, 28L,
Elective courses (6 hours)[3]

Computer Science Option
Applied Science 101, 102, 103, 104, 105
Computer Science 14, or 15, 114, 120, 121
Mathematics 81, 128, 129, 146
Physics 61
Elective courses (6 hours)[3]

Chemistry-Based Materials Science Option
Applied Science 122, 141, 142, 143, 144L, 145L
Chemistry 41, 41L, 51, 61, 62, 62L, 122, 181, 182,
Mathematics 128
Physics 61, 140,169
Elective courses (6 hours)[3]

Physics-Based Materials Science Option
Applied Science 141, 142, 143, 144L, 145L
Chemistry 51, 61
Mathematics 128, 129
Physics 28, 28L, 61, 105, 107, 108, 140, 160, 169
Elective courses (6 hours)[3]

Polymer Materials Science Option [2]
Chemistry 41, 41L, 51, 61, 62, 62L, 121, 122, 123, 124L, 141, 141L, 170L, 181, 181L, 182, 182L, 190
Elective courses (12 hours)[3]

97 Independent Study in Applied Sciences *(Var).* Prerequisite, permission of the instructor and the Chair of the Curriculum. Independent study under a member of the Applied Sciences faculty. Fall, spring, summer.

98 Seminar (1). Current topics in Applied Sciences presented by invited lecturers. Taken once for credit preferably in the fall of the Junior year. Participation in all semesters is encouraged. Fall and spring. Staff.

99 Research in Applied Sciences for Undergraduates (3). Prerequisites, permission of the instructor and the Chair of the curriculum. May be taken repeatedly for credit. Work done in Applied Sciences 99 may be counted towards graduation with Honors or Highest Honors by petition to the Chair of the curriculum. Further details on Applied Sciences 99 and the Honors program are available from the office of the curriculum, 18-1 Venable Hall. At least nine hours of independent work a week. Applied Sciences faculty.

101 Introduction to Signals and Systems *(BMME 106)* (3). Prerequisite, Physics 101 and permission of instructor. Analysis of linear systems by transform methods. Applications of Laplace and Fourier transform Fourier series to networks. Pole zero plots and stability analysis. *Three lecture hours a week.* Spring. Charlton.

102 Information, Modulation Noise and Communications Networks *(BME 107)* (4). Prerequisite, Physics 101 and permission of instructor. Physics and network models of active devices; diodes, transistors and integrated circuits. Applications of devices in systems. Frequency response of devices as well as filter design. *Three lecture hours a week and three laboratory hours a week.* Fall. Propst.

103 Analysis of Digital Systems *(BMME 128)* (3). Prerequisites, Physics 101, 102. Application of Boolean alegebra to the analysis and synthesis of switching circuits; techniques of minimizing Boolean functions; number systems; arithmetic operations; threshold logic, asynchronous; synchronous machines. Fall. Quint.

104 Linear Control Theory *(BMME 132)* (3). Prerequisite, Math 128 or equivalent. Linear control systems analysis and design are presented. Frequency and time domain characteristics and stability are studied. Spring. Charlton.

105 Digital Signal Processing I *(BMME 121)* (3). Prerequisite, Computer Science 16 or equivalent. This is an introduction to methods of automatic computation of specific relevance to biomedical problems. Sampling theory, analog-to-digital conversion, digital filtering, will be explored in depth. Spring. Lucas.

121 Synthesis of Polymers *(Chem. 121)* (3). Prerequsites, Chemistry 51, 62. Synthesis and reactions of polymers. Fall. Organic and inorganic chemistry faculty.

122 Physical Chemistry of Polymers *(Chem. 122)* (3). Prerequisite, Chemistry 181; prerequisite or corequisite, Chemistry 182. Kinetics of polymerization, molecular weight distribution and molecular weight measurements, solution properties, solid state properties of macromolecules. Spring. Physical chemistry faculty.

123 Intermediate Polymer Chemistry *(Chem. 123)* S(3). Prerequisite, Chemistry 122. Rheology and mechanical properties of polymers; plastics, fiber, and elastomer technology. Spring. Chemistry faculty.

124L Polymer Chemistry Laboratory *(Chem. 124L)* (2). Prerequisites, Chemistry 121, 122, Thermal analysis; solution viscosity; gel permeation chromatography; end group analysis; synthesis; characterization of an unknown polymer. One four-hour laboratory and one-hour lecture each week. Spring. Chemistry faculty. (Fee required)

141 Fundamental of Materials Science *(Chem. 190)* (3). Prerequisite, Chemistry 182; or prerequisite, Physics 28 and prerequisite or corequisite, Physics 105. Crystal geometry; diffusion in solids; mechanical properties of solids; electrical conduction in solids, thermal properties of materials; phase equilibria. Fall. Irene.

142 Chemistry and Physics of Electronics Materials Processing *(Chem. 192, Phys. 144)* (3). Prerequisite, Chemistry 182, or Physics 25C or 27, and permission of the instructor. A survey of materials' processing and characterization used in fabricating microelectronics devices. Crystal growth, thin film deposition and etching and microlithography, characterization techniques, electric and dielectric properties of materials. Spring. Chemistry and Physics faculty.

143 Chemistry and Physics of Surfaces *(Chem. 193)* (3). Prerequisite, Chemistry 190. The structural and energetic nature of surface states and sites; experimental surface measurements; reactions on surfaces including bonding to surfaces and absorptions; interfaces. Spring. Irene, Jarnagin.

144L Materials Laboratory I *(Phys. 148)* (2). Corequisite, Chemistry 190. Structure determination and measurement of the optical, electrical, and magnetic properties of solids. Fall. Briscoe, McNeil, Propst, Smith.

145L Materials Laboratory II *(Phys. 149)* (2). Prerequisite, Physics 148. Continuation of Physics 148 with emphasis on low-and high-temperature behavior, the physical and chemical behavior of lattice imperfections and amorphous materials, and the nature of radiation damage. Spring. Briscow, McNeil, Propst.

161 Biomaterials *(BMME 112)* (3). Prerequisites, Physiology 140 or equivalent. Chemical, physical, engineering and biocompatibility aspects of materials, devices or systems for implanation in or, interfacing with, the body, cells or tissues. Food and Drug Administration and legal aspects. Fall. Hanker, Kusy.

162L Biomedical Materials Laboratory (2). Prerequisite Applied Science 144L. A laboratory evaluation of fundamental or engineering properties of various biomaterials. Scientific methodology, data analysis, and technical report writing will be stressed. Fall, spring. Kusy.

[1] Physics 141 is required instead of Physics 101 and 102 in the Physics-Based Materials Science option and is an acceptable alternative in the other options.

[2] BIOL 62 or 63 is a recommended alternative for students who plan to attend dental or medical school.

[3] Participation in undergraduate research through registration in Applied Sciences 99 is recommended. Math 129 is also recommended.

[4] Or Computer Science 14.

Department of Art

Arthur S. Marks, *Chair*
Mary Pardo, *Assistant Chair for Art History*
Jerry L. Noe, *Assistant Chair for Studio Art*

The Department of Art welcomes undergraduates to take its beginning courses as electives. Introductory courses (1 - 19 in studio art; 20 - 44 in art history) do not assume previous work in high school. Students seeking advanced placement should contact the departmental adviser in either art history or studio art.

The Department offers three undergraduate majors: the B.A. in art history, the B.A. in studio art, and the B.F.A. in studio art.

In the Hanes Art Center the Department possesses fine facilities for the teaching of both art and art history, housing painting, drawing, printmaking, design studios as well as art history classrooms. Sculpture and ceramic sculpture are taught in the Art Lab building one mile north of campus.

The Sloane Art Library has a collection of over 80,000 volumes, and the slide and photograph collection is quite comprehensive. The adjacent Ackland Museum houses a growing and permanent accumulation of painting, prints, photographs, and sculpture. Our location allows easy access to the North Carolina Museum of Art in Raleigh, the Duke University Art Museum in Durham, and the National Gallery of Art in Washington, DC.

The policy of the Art Department is to accept transfer credit of 6 - 8 credit hours in art history and 6.0 credit hours in studio. Credit beyond this may be awarded by petition to the appropriate departmental adviser. One-half plus one course in the art major must be taken at UNC-Chapel Hill.

Usually in the freshman and sophomore (General College) years the student who plans to fulfill the requirements to major in art history takes Art 31, 32, 01, and 02. These four courses may be used as some of the Aesthetic Perspective or the Humanities and Fine Arts electives and the College electives in the General College Bachelor of Arts (B.A.) program. If possible, the student should take an additional elective in art history from the courses numbered 30 - 38 and 43, 44, 51, 52, 56 - 60, 62, 70 - 72, 74.

The Department requires art history majors by the end of their junior year to demonstrate to its satisfaction that they can read one of the following languages: French, German, classical Greek, Italian, Latin, or Spanish. Students may demonstrate competence in either of the following ways:

A. Taking foreign language 3, 4, thus choosing the General College foreign language option.
B. Advanced placement by examination in foreign language 21 (given or approved by the appropriate language department).

In the junior and senior years in the College of Arts and Sciences, the art history major will take at least 18 semester hours and at most 24 semester hours of art history in addition to the General College requirements. For the B.A. degree the maximum number of semester hours of art history and studio art which can be offered is 39 semester hours.

Of the art history courses required for the major, at least six semester hours must be in courses at the intermediate level (Art 50 - 89) and nine semester hours must be taken from the advanced level offerings (Art 90 - 199).

In the junior and senior years the major must take 15 to 24 semester hours in allied electives, which include all courses taught in the departments of the Division of Humanities and Fine Arts. We especially recommend courses in Classics, English, History, Philosophy, Music, Modern Languages, and Religion. Also required are 15 to 24 semester hours in nondivisional electives, and here we recommend History and Philosophy (if not offered as allied courses), Anthropology, Psychology, and Sociology.

Art history majors should note that all classical archaeology (CLAR) courses are cross listed as art history courses. Therefore they are not counted as allied but as major courses.

Art 31H and 32H are Honors sections of these courses open to students with a B average or entering freshmen who are prepared to undertake intensive work.

Program in Studio Art: The General College
Students entering the University and intending to major in studio art should take six courses in the General College: Art 01, 02, and 03; and either 15 (Painting), 16A or B (Sculpture), 17A, B, or C (Printmaking); and either 18 (Life Drawing), or 13 (Life Sculpture); and one art history course on the 20 - 44 level.

Program in Studio Art Leading to the B.A. Degree
Most students majoring in studio art will continue in the B.A. degree program in the College of Arts and Sciences by declaration to the College. In this program, in addition to the General College art requirements, the student will take two art history courses, one of which will be on the 50 level or above; and one of which will be in the area of 19th or 20th century. One additional semester of painting, sculpture or printmaking, and studio art electives are generally

taken at the beginning level for a total of 39.0 - 41.0 credit hours in the Department of Art. Any hours beyond this number will not count towards graduation.

Program in Studio Art Leading to the B.F.A. Degree
This course of study is designed as a preprofessional preparation for painters, printmakers, and sculptors. Approximately one half of the semester hours required for this degree are art courses (60 credit hours).

Admission to the B.F.A. program will be by declaration to the Dean of Arts and Sciences that the student intends to pursue the B.F.A. degree. If a student enters the University as a freshman with an intent to pursue this degree he/she is advised to contact the departmental adviser in the freshman year and no later than the sophomore year.

Courses taken in the College of Arts and Sciences under this program will include: two art history (one of which must be 50-level or above and one of which will be in the area of 19th century or 20th century); continuation of painting, sculpture, or printmaking (for an additional 14.0 credit hours); Art 13, 18 or 48; and studio art electives for a total of 17.0 - 19.0 credit hours beyond the General College, one of which may be an additional art history course. (This constitutes 41 - 43 credit hours.)

Minor in Art History
A student who plans to minor in art history should consult with an undergraduate adviser. The minor consists of five courses in art history for a total of 15.0 credit hours. Two or three courses should be selected from the beginning level (30 - 44) and the remainder from the intermediate or advanced level (50 - 199). Restrictions: Art 31 and 32 cannot be included in the minor. No studio courses can be included in the minor.

Honors in Art
Students interested in doing Honors projects in either art history or studio art, to receive the B.A. or B.F.A. with honors or highest honors, must have an overall GPA of 3.2 and have demonstrated excellence in major course work in the discipline. They should first find an adviser on either the art history or studio faculty who will be willing to supervise their work.

Students enroll in the Honors courses (Art 90 for fall, Art 91 for spring) in the Honors office located in Steele Building. This should be done after consultation with both the Art Department Honors adviser and the faculty member who has agreed to supervise the work. Students should keep in close contact throughout the year with their faculty Honors adviser. The deadline for completion of the project is April 15 of the senior year, and students should inform the departmental secretary in April of the date of completion of the project so that this information can be printed in the Commencement program. See the University HONORS booklet and the Departmental HONORS Documents for more details.

Program in Art History
The introductory survey courses in art history are Art 31 (Ancient, Medieval, and Early Renaissance) and Art 32 (Renaissance, Baroque, and Modern), each a four credit hour course. Together these form a survey of the history of Western art from antiquity to the present. Art 31 need not be taken before Art 32. Other courses which are open to any student with no previous study in the history of art necessary are: Art 30, 33, 34, 35, 36, 37, 38, 43, and 44.

Undergraduates wishing to take art history courses numbered from 50 - 89 must have taken at least one other art history course or have permission from the instructor. Art 30, 31, 32, 33, 34, 35, 36, 37, 38, and 43 satisfy the General College requirements for the Aesthetic Perspective in Fine Arts. The following courses satisfy the requirement for the Aesthetic Perspective at the College of Arts and Sciences level: Art 51, 52, 56, 57, 58, 59, 60, 62, 70, 71, 72, and 74.

Students should check with the Department of Art for the exact listing of courses offered in a given semester. Descriptions of courses are available in the departmental office. Courses in classical archaeology (CLAR) and ancient art (for which one may receive art history credit) offered through the Department of Classics are identified by CLAR.

When looking at the course listings below, please keep the following levels in mind:

Art history beginning level courses numbered 20 - 44: no prerequisites.

Art history intermediate level courses numbered 50 - 89: prerequisite of one introductory art history course or permission of the instructor.

Art history advanced level courses numbered 90 - 199: prerequisite of one intermediate level art history course or permission of the instructor.

Introductory Courses and Courses of General Interest

21 Freshman Seminar (3).

30 History of Architecture (3). A survey of the history of architecture from the pyramids to the present for students who have had no previous art history or architectural history courses.

30H Honors in the History of Architecture (3). Admission by permission of the Honors Dean.

31 History of Western Art I (3). Art 31 is the first semester of a two-semester survey which is designed to acquaint the beginning student with the historical development of art and with the offerings and instructors of the art history faculty. Art 31 covers ancient, medieval, and early Renaissance periods. Fall.

31H Honors Section of Art 31 (3). Admission by permission of Honors Dean.

32 History of Western Art II (3). Art 32 is the second semester of the two-semester survey course including Western art from the Renaissance to modern art. Art 31 is not a prerequisite for Art 32, but all art history majors are required to take both courses. Spring.

32H Honors Section of Art 32 (4). Admission by permission of Honors Dean.

33 Ancient Survey (3). This course covers the history of ancient art as seen in historical context, discusses the Age of the Pyramids in Egypt, the tombs of the Pharaohs in Thebes, the great palaces of the Mesopotamians and the Myceneans, the frescoes of the Minoans and the Etruscans, the development of classical art in Greece, and finishes with the arts of the Roman Empire.

34 Survey of Northern European Art (3). This is a survey of major Dutch and Flemish artists from the beginning of the 15th century to the last quarter of the 17th century. It will include such artists as Jan van Eyck, Pieter Bruegel, and Rembrandt.

35 Medieval Survey (3). Study of architecture, sculpture and painting in early Christian, Byzantine, Pre-Romanesque, Romanesque, and Gothic Europe.

36 Renaissance Survey (3). This course surveys major developments in Italian art from about 1250 to about 1520, studying selected examples of painting, sculpture, and architecture to define the cultural role of art in this period.

37 Baroque Survey (3). Study of major figures of European art of the 17th century.

38 Modern Survey (3). An introduction to the visual arts of the modern period, from the mid-18th century to the present. Impressionists, Symbolists, Cubists are just a few of the schools of art studied.

43 American Art (3). From Colonial times to the present.

44 Modern Design (3). A survey of 20th century design, with emphasis on the special qualities found in America. Topics include the history of clothes fashion, industrial design such as cars, graphic arts, and architecture. The social background of design changes will be discussed, also city planning.

64 Women in the Visual Arts I *(Women's Studies 64)* (3). This course analyzes the representation of women in Western Art, placing special emphasis on works by women.

80 Topics in Art History (3). Selected studies which vary as offered. Prerequisite, permission of instructor.

90 Honors in Art (3). Fall. Permission of instructor.

91 Honors in Art (3). Spring. Permission of instructor.

98 Directed Readings in Art History (3). Permission of instructor.

117 Topics in the History of Architecture (3). Selected topics in the history of American and European architecture. Prerequisite, any intermediate level art history course or permission of the instructor.

124 Far Eastern Art (3). Selected topics in the history of Far Eastern art including the architecture, sculpture, painting, and minor arts of China and Japan. Prerequisite, any intermediate level art history course or permission of the instructor.

151 Women in the Visual Arts II *(Women's Studies 151)* (3). Prerequisites, one of the following: Women in Visual Arts 1, Art 32, or permission of instructor. Discussion of selected topics related to the representation of women in Western Art and/or women as producers of art. Sheriff.

174 Art and Culture *(Anthropology 134, Folklore 134)* (3). Cross-cultural study of form, image, and meaning in painting, drawing and sculpture. Emphasis on the interrelationship of religion and art in selected prehistoric and contemporary sociocultural traditions. Spring. Johnson.

185 The Literature of Art (3). A study of the principal critics and historians who have contributed to the development of modern art history. Also application of the principles to specific works of art.

186 Topics in the History of Art. (3). Special topics course for particular needs not covered by the regular topics courses Art 110 - 119. Prerequisite, any intermediate level art history course or permission of the instructor.

187 Studies in the History of Graphic Art (3). Prerequisite, any intermediate level art history course or permission of the instructor.

199 Readings in Art History (3). Readings in the history of art for individual students. Prerequisite, any intermediate level art history course or permission of the instructor.

Courses by Field of Interest

Ancient

(see also Introductory Courses)

20 (CLAR 20) Ancient Cities (3).

42 (CLAR 50) Archaeology of Italy (3).

49 (CLAR 41) Greek Archaeology (3)

77 (CLAR 77) Art of Classical Greece (3). Prerequisite, any introductory level art history course. A chronological study of the main development of Greek sculpture, architecture, and painting from the 5th to the 1st centuries B.C.

78 (CLAR 78) Roman Art (3).

110 Topics in the History of Ancient Art (3). Selected topics in the history of ancient Greek and/or Roman art and architecture. Prerequisite, any intermediate level art history course or permission of the instructor.

148 Art in the Age of Justinian and Theodora (CLAR 148) (3). Prerequisite, any course in history, art history, classics or permission of instructor. Interdisciplinary course is based on monuments, history and contemporary writings of Byzantine empire during the rule of Justinian I (527 - 565) and the empress Theodora (527 - 548). Approach will be comparative, analytical and contextual and will include a feminist perspective. Fall.

189 (CLAR 189) Studies in Near Eastern Archaeology (3).

190 (CLAR 190) Greek Architecture (3).

191 (CLAR 191) Architecture of Etruria and Rome (3).

193 (CLAR 193) Greek Painting (3). A survey of the development from geometric to Hellenistic painting through a study of Greek vases, mosaics, and mural paintings.

194 Archaic Greek Sculpture (3).

195 Classical Greek Sculpture (3).

196 Hellenistic Greek Sculpture (3).

198 Aegean Civilization and Near Eastern Backgrounds (CLAR 198)

Medieval

(see also Introductory Courses)

51 History of Early Christian and Byzantine Art (3). A survey of major developments in early Christian and Byzantine painting and sculpture. Prerequisite, any introductory level art history course or permission of the instructor.

52 Medieval Art in Western Europe (3). Survey of major developments in painting and sculpture in Europe during the Latin Middle ages (300 - 1400 A.D.). Prerequisite, any introductory art history course or permission of the instructor.

53 Medieval Architecture (3). Survey of Western European architecture 300 - 1300 A.D. Prerequisite, any introductory art history course or permission of the instructor.

54 Medieval Iconography (3). Understanding the meaning of Medieval art by examining the iconography of selected important works. Prerequisite, any introductory art history course or permission of the instructor.

55 Monuments of Medieval Art (3). The theory and aesthetics of medieval sculpture, painting, and architecture from 300 to 1300 A.D. in France, England, Italy, Spain, and Germany.

82 Crusader Art (3). This course surveys the main works of Crusader art in order to understand their nature and development from 1099 to 1291. The Crusader monuments are set in their historical context and in relation to Byzantine and Western European art. Prerequisite, any introductory level art history course or permission of the instructor.

111 Topics in the History of Early Medieval Art (3). Selected topics in the history of early Medieval art and architecture in Europe between the 4th and 11th centuries. Prerequisite, any intermediate level art history course or permission of the instructor.

112 Topics in Medieval Art: 1000 - 1453 (3). Selected topics in the history of medieval art and architecture in Europe between the 11th and 15th centuries. Prerequisite, any intermediate level art history course or permission of the instructor.

149A Constantinople: The City and Its Art (CLAR 149A) (3). Prerequisite, any course in history, art history, classics or permission of instructor. Interdisciplinary study of the city of Constantinople, capital of the Byzantine empire from 325 to 1453, with emphasis on the artistic, social and cultural context. Includes study of monuments and their decoration, objects, contemporary documents and sources, all within a chronological, historical framework. Fall, spring. Connor.

149B In Constantinople (CLAR 149B) (3). Prerequisite, 149A or permission of instructor. This course, taught primarily in Istanbul, once Constantinople, capital of the Byzantine empire 325 - 1453, provides first-hand experience with monuments and an overview of the history, topography, and culture of a great city in the history of civilization. Summer. Connor, Gates.

150 Romanesque Architecture (3). An in-depth survey of medieval architecture from 1000 A.D. to 1140 A.D. in France, England, Italy, Spain, and Germany. Prerequisite, any intermediate level art history course or permission of the instructor.

152 Gothic Architecture and Sculpture (3). Origins of Gothic art in France and the stages of development through the middle of the 13th century. Emphasis given to problems of methodology in the study of medieval art. Prerequisite, any intermediate level art history course or permission of the instructor.

153 History of the Illuminated Book (3). Chronological survey of major developments in book painting during the European Middle Ages from 300 to 1450 A.D. Prerequisite, any intermediate level art history course or permission of the instructor.

154 Northern European Art of the 14th and 15th Centuries (3). Prerequisite, any intermediate level art history course or permission of the instructor.

Renaissance/Baroque

(see also Introductory Courses)

56 Early Renaissance in Italy (3). The purpose of the course is to develop a solid acquaintance with representative aspects of Italian art from about 1250 to 1450. In alternate semesters the emphasis may change from Central (Florence, Rome) to Northern (Venice) Italy. Prerequisite, any introductory level art history course or permission of the instructor.

57 High Renaissance in Italy (3). The course is a survey of major Italian painting from about 1490 to 1575. From semester to semester the emphasis may alternate between Central Italian and Venetian/ North Italian works. Prerequisite, any introductory level art history course or permission of the instructor.

58 Italian Renaissance Architecture (3). A survey of key architectural developments in Central (Florence, Rome) and Northern (Veneto, Lombardy) Italy between 1400 and 1600. Prerequisite, any introductory level art history course or permission of the instructor.

59 Northern European Art: Van Eyck to Bruegel (3). This course will treat the art of the Netherlands (Holland and Belgium) in detail from Jan van Eyck to Pieter Bruegel. Prerequisite, any introductory level art history course or permission of the instructor.

60 Northern European Art: Bruegel to Rembrandt (3). This course will discuss in detail the art of the Netherlands (Holland and Belgium) from Bruegel to Rembrandt. Prerequisite, any introductory level art history course or permission of the instructor.

113 Topics in Renaissance Art (3). Selected topics in the history of Renaissance art and architecture in Europe. Prerequisite, any intermediate level art history course or permission of the instructor.

114 Topics in Baroque Art (3). Selected topics in the history of Baroque art in Europe. Prerequisite, any intermediate level art history course or permission of the instructor. 160 Renaissance Art in Venice (3). A special topics upper level undergraduate course focusing on aspects of 15th and 16th century painting, sculpture, and architecture in Venice and its Dominion. Prerequisite, any intermediate level art history course or permission of the instructor.

162 (74) Sixteenth Century Italian Painting (3). Deals with major schools: High Renaissance, Leonardo, Michelangelo, Raphael; Mannerism in Rome and Florence; Venetian painting with emphasis on Titian and Giorgione. Prerequisite, any intermediate level art history course or permission of the instructor.

163 Sixteenth Century Venetian Painting (3). This course focuses on the achievements of High Renaissance painting in Venice, particularly as embodied in the major works of Giorgione, Titian, Tintoretto, and Veronese. Prerequisite, any intermediate level art history course or permission of the instructor.

164 The Art of Florence (3). A study of Florentine art from its beginning in the 16th century with primary emphasis on its religious dimensions. Prerequisite, any intermediate level art history course or permission of the instructor.

165 Sixteenth Century Dutch and Flemish Art (3). This is an advanced course concerned with the major art trends in the 16th century and their importance for the 17th century. Particular attention will be paid to the interaction between The Netherlands and Italy. Prerequisite, any intermediate level art history course or permission of the instructor.

170 History of 17th Century Dutch and Flemish Art (3). The major trends in painting, drawing, and graphics from Pieter Bruegel through Rembrandt. Prerequisite, any intermediate level art history course or permission of the instructor.

171 Italian Baroque Painting (3). An advanced course in 17th century painting in Rome. Emphasis will be given to the period 1590 to 1610; to the revolutionary innovations in light and in psychological interpretation in Caravaggio; to changing attitudes toward mythology in Annibale Carracci. The development toward High Baroque ceiling decoration will also be traced. Prerequisite, any intermediate level art history course or permission of the instructor.

172 Seventeenth Century French and Flemish Art (3). Prerequisite, any intermediate level art history course or permission of the instructor.

Modern

(see also Introductory Courses)

43 American Art (3). From Colonial times to the present.

44 Modern Design (3). A survey of 20th-century design, with emphasis on the special qualities found in America. Topics include the history of clothes fashion, industrial design such as cars, graphic arts, and architecture. The social background of design changes will be discussed, also city planning.

62 British Art (3). Survey of British painting from the time of Hogarth (ca. 1750) through the 19th century. Emphasis will be given to significant artists (Hogarth, Reynolds, Turner, Gainsborough, Constable); movements (neoclassicism, romanticism, Pre-Raphaelitism); and ideas (impact of science, industrialization). Prerequisite, any introductory level art history course or permission of the instructor.

70 Eighteenth Century Art (3). An introductory survey of the architecture, sculpture, and painting with emphasis on European developments in the "fine" and "decorative" arts from the late 17th century to the time of the French Revolution. Prerequisite, any introductory level art history course or permission of the instructor.

71 Romanticism (3). This course will focus on the theory and definition of Romanticism and will consider European art from 1800 - 1850. Prerequisite, any introductory level art history course or permission of the instructor.

72 Impressionism and Symbolism (3). A detailed study of selected paintings and associated critical texts, intended to develop an understanding of the issues of late 19th-century Impressionism and Symbolism. Prerequisite, any introductory level art history course or permission of the instructor.

74 Modern Architecture (3). Developments from 1800 to the present. Prerequisite, any introductory level art history course or permission of the instructor.

75 Twentieth Century Art (3). Survey of painting from around 1885 to the present, introducing the major artists of the day and investigating the themes revealed through their art. Prerequisite, any introductory level art history course or permission of the instructor.

76 Post-1945 Art (3). An investigation of visual arts from the end of World War II to the present time, including abstract expressionism, pop art, minimal art, new realism. Prerequisite, any introductory level art history course or permission of the instructor.

115 Topics in Modern Art (3). Selected topics in the history of European art and architecture of the 18th, 19th, and 20th centuries. Prerequisite, any intermediate level art history course or permission of the instructor.

116 (150) Topics in Modern Design (3). Prerequisite, any intermediate level art history course or permission of the instructor.

117 Topics in the History of Architecture (3). Selected topics in the history of European and American architecture. Prerequisite, any intermediate level art history course or permission of the instructor.

119 Topics in American Art (3). Selected topics in the history of American art and architecture. Prerequisite, any intermediate level art history course or permission of the instructor.

173 Eighteenth Century French Painting (3). Survey of the theory and practice of painting in France 1699 - 1800. Prerequisite, any intermediate level art history course or permission of the instructor.

180 Theories of Modern Art (3). A study of theoretical issues central to the understanding of modern art and criticism (e.g., modernism, the avant-garde, formalism, originality). Prerequisite, any intermediate level art history course or permission of the instructor.

181 (175) Modern Art and Criticism (3). Prerequisite, any intermediate level art history course or permission of the instructor.

Museum Studies

81 Introduction to Connoisseurship (3). This course is designed to initiate younger students to connoisseurship, the methods through which sight and reasoning are brought to bear on works of art to study the aesthetic, technical, and historical issues that individual objects raise. The course will train the eye through exclusive focus on actual objects in the collection of the Ackland Museum. Prerequisite, any introductory level art history course and permission of the instructor.

184 Museum Studies (3). Permission of instructor required. Designed to offer the essentials of museum work to students considering careers as curators, registrars, etc. The course will use the Ackland Museum and its collection as a laboratory. Instruction will also be given in museum management, the duties of a registrar, and the packing and shipping of art works.

Studio Art Courses

All courses listed in this section are open as electives to juniors and seniors, and may be offered for credit in the College of Arts and Sciences. Art 01 and 02 fulfill the General College requirements for the Aesthetic Perspective in Fine Arts. Art 01, 02, 15, 16A, 16B, 17A, 17B, and 17C fulfill the Arts and Sciences requirements for the Aesthetic Perspective in Fine Arts.

Studio faculty teaching assignments vary each semester, and current schedules are available in the Art Department office. As a rule, painting courses are taught by Kinnaird, Saltzman, and Zaborowski; printmaking by Gadson and Grabowski; sculpture by Noe, Toubes, and Hirschfield. Drawing and design are taught by all faculty members, teaching assistants, and visiting artists. Artists-in-residence also teach courses in the media of their specialty each semester. Permission for independent study must be given by the faculty member the student wishes to study with, and a concise description of the project to be undertaken is required in writing.

Prerequisites of courses are listed beside the name. Most courses are taught every year, fall and spring, and during summer sessions. All studio courses meet for six studio hours a week and students are expected to do additional hours of independent work for each 3 credit hour course. Courses listed as variable (Var.) credit are normally taken for 2 credit hours. Upon advice of the departmental adviser and with permission of the instructor, the student may register for additional credit hours. Three hours of independent work in the studio is contracted for each additional credit hour.

Introductory Courses

01 Basic Drawing and Composition (3). Designed to develop aesthetic sensibility, analytical capacity, and fundamental skills in two-dimensional media. 02 3-D Design/Introduction to Sculpture (3). Designed to develop aesthetic sensibility, analytical capacity, and fundamental skills in three-dimensional media.

03 2-D Design (3). A study of principles common to all visual work emphasizing color, line, space, volume, texture, and their psychological and physical effect on the viewer.

Beginning Level Studio Courses

13 Life Sculpture (3). Prerequisite, Art 02. Development of proficiency in life modeling through the use of various sculpture materials (study from the model).

14 Drawing (3). Prerequisite, Art 01. Advanced topics in drawing.

15 Painting I (3). Prerequisite, Art 01. Introduction to the techniques of 2-dimensional thought and process through the application of various painting media.

16A Sculpture I (A) (3). Prerequisite, Art 02. Introduction to the techniques of 3- dimensional thought and process through the application of the various sculpture media.

16B Sculpture I (B) (3). Prerequisite, Art 02. An investigation of clay as a sculptural medium developing technical skills, aesthetic awareness, and historical perspective.

17A Printmaking I (A) (3). Prerequisite, Art 01. Introduction to the thought and process of intaglio and relief, their application and procedure.

17B Printmaking I (B) (3). Prerequisite, Art 01. Introduction to the thought and process of lithography, its application and procedure.

17C Printmaking I (C) (3). Prerequisite, Art 01. Introduction to the thought and process of screen printing, its application and procedure.

18 Life Drawing I (3). Prerequisite, Art 01. Development of proficiency in figure drawing through the use of various drawing and painting materials (study from the model).

Intermediate Level Studio Courses

45 Painting II (Var.). Prerequisite, Art 15. Continuation of 15.

46A Sculpture II (A) (Var.). Prerequisite, Art 16A. Continuation of 16A.

46B Sculpture II (B) Ceramic (Var.). Prerequisite, Art 16B. Continuation of 16B.

47A Printmaking II (A) Relief and Intaglio (Var.). Prerequisite, Art 17A. Continuation of 17A.

47B Printmaking II (B) Lithography (Var.). Prerequisite, Art 17B. Continuation of 17B.

47C Printmaking II (C) Screen Printing (Var.). Prerequisite, Art 17C. Continuation of 17C.

48 Life Drawing II (3). Prerequisite, Art 18. Continuation of 18.

65 Painting III (Var.). Prerequisite, Art 45. Continuation of 45.

66A Sculpture III (A) (Var.). Prerequisite, Art 46A. Continuation of 46A.

66B Sculpture III (B) Ceramic (Var.). Prerequisite, Art 46B. Continuation of 46B.

67A Printmaking III (A) Relief and Intaglio (Var.). Prerequisite, Art 47A. Continuation of 47A.

67B Printmaking III (B) Lithography (Var.). Prerequisite, Art 47B. Continuation of 47B.

67C Printmaking III (C) Screen Printing (Var.). Prerequisite, Art 47C. Continuation of 47C.

85 Painting IV (Var.). Prerequisite, Art 65. Continuation of 65.

86A Sculpture IV (A) (Var.). Prerequisite, Art 66A. Continuation of 66A.

86B Sculpture IV (B) Ceramic (Var.). Prerequisite, Art 66B. Continuation of 66B.

87A Printmaking IV (A) Relief and Intaglio (Var.). Prerequisite, Art 67A. Continuation of 67A.

87B Printmaking IV (B) Lithography (Var.). Prerequisite, Art 67B. Continuation of 67B.

87C Printmaking IV (C) Screen Printing (Var.). Prerequisite, Art 67C. Continuation of 67C.

Advanced Level Studio Courses

100 Individual Studies in Painting (Var.). Permission of the instructor.

101A Individual Studies in Sculpture (Var.). Permission of the instructor.

101B Individual Studies in Ceramic Sculpture (Var.). Permission of the instructor.

102A Individual Studies in Relief and Intaglio (Var.). Permission of the instructor.

102B Individual Studies in Lithography (Var.). Permission of the instructor.

102C Individual Studies in Screen Printing (Var.). Permission of the instructor.

103 Senior Seminar (2). Prerequisite, 20 hours studio art. The Senior Seminar is designed to integrate the prior learning experiences and in addition introduce the studio major to practical aspects involved in a career in the visual arts. Fall, spring.

105 Painting V (Var.). Prerequisite, Art 85. Continuation of 85.

106A Sculpture V (A) (Var.). Prerequisite, Art 86A. Continuation of 86A.

106B Sculpture V Ceramic (Var.). Prerequisite, Art 86B. Continuation of 86B.

107A Printmaking V Relief and Intaglio (Var.). Prerequisite, Art 87A. Continuation of 87A.

107B Printmaking V Lithography (Var.). Prerequisite, Art 87B. Continuation of 87B.

107C Printmaking V Screen Printing (Var.). Prerequisite, Art 87C. Continuation of 87C.

125 Painting VI (Var.). Prerequisite, Art 105. Continuation of 105.

126A SculpIture VI (Var.). Prerequisite, Art 106A. Continuation of 106A.

126B Sculpture VI Ceramic (Var.). Prerequisite, Art 106B. Continuation of 106B.

127A Printmaking VI Relief and Intaglio (Var.). Prerequisite, Art 107A. Continuation of Art 107A.

127B Printmaking VI Lithography (Var.). Prerequisite, Art 107B. Continuation of Art 107B.

127C Printmaking VI Screen Printing (Var.). Prerequisite, Art 107C.

128 Special Topics in Studio Art (Var.). Permission of the department.

155 Painting VII (Var.). Prerequisite, Art 125. Continuation of Art 125.

156A Sculpture VII (Var.). Prerequisite, Art 126A. Continuation of Art 126A.

156B Sculpture VII Ceramic (Var.). Prerequisite, Art 126 B. Continuation of Art 126B.

157A Printmaking VII Relief and Intaglio (Var.). Prerequisite, Art 127A. Continuation of Art 127A.

157B Printmaking VII Lithography (Var.). Prerequisite, Art 127B. Continuation of Art 127B.

157C Printmaking VII Screen Printing (Var.). Prerequisite, Art 127C. Continuation of Art 127C.

175 Painting VIII (Var.). Prerequisite, Art 155. Continuation of Art 155.

176A Sculpture VIII (Var.). Prerequisite, Art 156A. Continuation of Art 156A.

176B Sculpture VIII Ceramic (Var.). Prerequisite, Art 156B. Continuation of Art 156B.

177A Printmaking VIII Relief and Intaglio (Var.). Prerequisite, Art 157A. Continuation of Art 157A.

177B Printmaking VIII Lithography (Var.). Prerequisite, Art 157B. Continuation of Art 157B.

177C Printmaking VIII Screen Printing (Var.). Prerequisite, Art 157C. Continuation of Art 157C.

Astronomy

(See Physics and Astronomy)

Department of Biochemistry and Biophysics

Michael G. Douglas, *Chair*

The Department of Biochemistry and Biophysics offers a number of courses to undergraduate students even though it has no program leading to a B.A. or B.S. degree. The Department serves undergraduate students who are interested in biochemistry, particularly students seeking a health-related career. It offers courses, research opportunities and counseling to students taking premedical, predental, nursing, dental hygiene, pharmacy or public health curricula. Students majoring in other scientific disciplines, such as a B.A. degree in Chemistry, Biology, or Physics also are served by the Department of Biochemistry and Biophysics.

7 Introduction to Biochemistry (4). Designed to meet the needs of Prenursing students, Predental Hygiene students and students in the Medical Allied Health Professions. Brief review of inorganic and organic chemistry followed by a survey of biochemistry. Concurrent registration in BIOC 7L required. One year of high school chemistry is strongly recommended. Three lecture hours and one two-hour laboratory a week. Fall. G. Sancar (Coordinator); staff.

8 Introduction to Biochemistry (4). Prerequisite, Biochemistry 7 or equivalent. Designed to meet the needs of Prenursing students, Predental Hygiene students and students in the Medical Allied Health Professions. Covers basic and clinically relevant aspects of Biochemistry. Concurrent registration in BIOC 8L required. Three lecture hours and one two-hour laboratory a week. Spring. Toews (coordinator); staff.

40 Biochemistry of Nutrition (2). Prerequisites, Chemistry 11, 11L and 21, 21L. A study of the science of nutrition with emphasis on: food, its nutrients and their relation to health; the biochemical or physiological role of required dietary nutrients; and the relevance of nutrition in preventive dentistry. Students should gain sufficient knowledge of the subject to allow them to make value judgments about nutrition and health claims in the media. Fall. Frazier.

66 Biochemistry for Pharmacy Students (4). Prerequisites, Chemistry 61, 62, or equivalent. Lectures and recitation concerning the chemistry of biological molecules important in the process of the living organism. Includes consideration of: enzymes, energetics, metabolism of carbohydrates, lipids, nucleic acids, proteins, and other nitrogen compounds; vitamins as coenzymes; metabolic regulation, biochemical genetics and the role of biochemistry in drug design. Spring. Piantadosi.

102 Undergraduate Research in Biochemistry (1 - 3). Prerequisites, an overall 3.0 G.P.A. and permission of course director. For juniors and seniors who wish to carry out an independent, mutually arranged research project in the laboratory of a biochemistry faculty sponsor. Restricted to on-campus work. Minimum three hours per week for each unit of credit per semester. May be repeated. May not substitute for honors, advanced elective, or other course requirements of another Department. A written report is required in each term. Fall and spring. Fried, Staff.

103 Biochemistry for Dental Students (5). Prerequisite, Chemistry 62, or equivalent. This course may be taken by qualified students who are not majoring in biochemistry. Fall. Bell; staff.

104 Enzyme Mechanisms and Metabolic Regulation (3). Prerequisite, Chemistry 130 or equivalent. A focus on enzyme architecture will illustrate how the shapes of enzymes are designed to: 1) optimize the catalytic step; 2) become allosterically modified for regulation of the rate of catalysis. Lectures will specifically address enzyme structure, evolution, kinetics, isozymes, and integration of metabolic pathways. Spring. Traur, Wolfenden, Jones.

105 Molecular Biology (3). Prerequisites, undergraduate biochemistry or genetics, and organic chemistry. Mechanisms of replication, transcription, and translation of genetic material in prokaryotic and eukaryotic systems, gene sequence and organization, biochemical genetics, and regulatory mechanisms. Fall. Popko, Swanstrom, Vos.

108 Cellular Membranes (3) Prerequisite, Chemistry 130 or equivalent. Cellular organization, structure of lipids and membrane proteins, and their interactions; transport systems; biogenesis, membrane fusion, and traffic; cytoskeletal protein-membrane interactions; transmembrane signalling. Fall. Meissner, Lentz.

110 Advanced Molecular Biology I *(Microbiology 108) (Genetics 110) (Pharmacology 136) (Biology 178)* (3). Prerequisites, at least one undergraduate course in both Biochemistry and Genetics and permission of the instructor. DNA structure, function, and interactions in prokaryotic and eukaryotic systems, including chromosome structure, replication, recombination, repair and genome fluidity. Fall. Griffith, A. Sancar, Bedinger.

111 Advanced Molecular Biology II *(Microbiology 109) (Genetics 111) (Pharmacology 137) (Biology 179)* (3). Prerequisites, at least one undergraduate course in both Biochemistry and Genetics and permission of the instructor. RNA structure, function, and processing in biological systems including transcription, gene regulation, translation, and protein targeting. Spring. Kole, Fried, Searles.

125 Plant Physiology and Biochemistry *(Biology 125)* (3). Prerequisites, Biology 11 and Biology 41 or 52. An advanced course covering growth of plants including photosynthesis, nitrogen fixation, and biosynthesis of cellular components; developmental processes; hormonal regulation and responses to stress. Spring. Staff (Biology).

134 Case Studies in Structural Molecular Biology (3). Prerequisite, Chemistry 130 or equivalent. Principles of macromolecular structure and function with emphasis on proteins, molecular assemblies, enzyme mechanisms and ATP enzymology. Fall. Carter.

139 Hormones and Evolution *(Biology 139)* (2). Prerequisites, Chemistry 130 or Biology 52 or Biology 53 or equivalent. An introduction to the chemistry of hormones and the biochemical mechanisms underlying their biological actions in evolutionary perspective with emphasis on unifying concepts. Spring. Pearlman.

142 Biochemical Toxicology *(Toxicology 142)* (3). Prerequisites, Chemistry 130, and one additional biochemistry course (or permission of Course Director). Biochemical actions of toxicants, and assessment of cellular damage by biochemical measurements. Course intended primarily for graduate students. Spring. Holbrook (Course Director).

144 Physical Biochemistry (3). Prerequisites, Chemistry 130 and two semesters of physical chemistry. Theory and methods applicable to the study of biological macromolecules. Topics will include: macromolecules in solution, applications of random- walk theory, multiple equilibria, magnetic resonance spectroscopy, and theory and applications of fluorescence spectroscopy. Three lecture hours per week. Spring. Hermans, Lentz.

180 DNA and Cell Pathology *(Genetics 180) (Pathology 180)* (3). Prerequisites, Chemistry 130 and permission of the instructor. The basic chemistry of DNA and its associated structural and replicative proteins as it relates to mechanisms and carcinogenesis. Three lecture hours a week. Spring. (1995 and alternate years). Topal.

189 Nucleic Acid Techniques *(Biology 189, Genetics 189)* (4). Prerequisites, some molecular biology, permission of the instructor. This two-week intensive course is part of the series of Carolina Workshops. Specialized topics emphasized vary, but usually include basic techniques such as isolation of nucleic acids, Northern and Southern blotting, cloning in viruses and plasmids, and DNA sequencing. Fee required. Eight laboratory hours. Fall, spring, and summer courses available. Carl and staff.

Department of Biology

Ralph S. Quatrano, *Chair*

The Bachelor of Science and Bachelor of Arts in Biology are preferred degrees leading to careers in medical, dental, veterinary, environmental, marine, and biological sciences. Training in biology prepares students for careers in teaching, government, and private industry. State and federal agencies in agriculture, health, human services, environmental protection, etc., seek out students with good biological backgrounds. New areas of biotechnology and genetic engineering have been added to opportunities in more traditional fields of research in marine biology, limnology, pharmacy, medicine, pathology, forestry, and horticulture. The degree programs in biology can provide a liberal education directed toward an appreciation of the complexity of nature.

All departmental majors gain a firm foundation in essential areas of biology through the core curriculum, and have ample opportunity to specialize in botany, molecular biology, genetics, ecology, cell biology, physiology, developmental biology, animal behavior, animal or plant systematics, and evolution. Undergraduate degree programs are planned with flexibility to meet the diverse needs of students with widely different professional goals. This includes students who wish to complete honors, double majors, or the prerequisites for special graduate programs in biological environmental, and health-related sciences.

Bachelor of Science in Biology

This program is designed for those students who intend to continue a graduate study in biological or health sciences. Students beginning the B.S. program can transfer at any time to the B.A. major without difficulty so long as the nonscience perspective elective requirements are met.

B.S. requirements include the following courses:

English 11, 12, and Foreign Language 3, 4 (through level 4; Language 4 may be taken PS/F unless Language 4 is used to satisfy the General College requirement; French, German, Russian, or other modern language in which there is a significant scientific literature are recommended).

Mathematics 31, plus one additional quantitative course from the following list: Mathematics 32, Computer Science 14, Statistics 11 (One course in statistics is recommended).

Chemistry 11-11L, 21-21L, 41-41L, 61, 62-62L.

Physics 24-24L, 25-25L, or 24c-24L, 25c-25L, or 26, 27.

Biology Major courses to include 11-11L (or advanced placement for it); Core courses, 52 (Cellular and Developmental Biology), 53 (Molecular Biology and Genetics), 54 (Population Biology and Ecology), and one Organismal Structure and Diversity course chosen from 41, 43, 51,63-63L, 72-72L, 73-73L, 80-80L, 103, 105, 111, 114-114L, or 134-134L; 4 additional Biology electives beyond 11-11L, at least two of them with laboratory and two of them numbered above 100.

Other Required Courses, 2 courses which may be additional biology or natural science, or math courses.

Perspectives (nonscience), 7 courses to include: 1

Philosophical, 2 Aesthetic, 2 Social Science, 2 Western/ Non-Western Comparative courses to be chosen from approved lists.

Physical Education, 2 units (do not count toward units for graduation).

Suggested program of study for B.S. majors:

Freshman year
Biology 11, 11L
English 11, 12
Language 2, 3
Chemistry 11, 11L, 21, 21L
Mathematics 31, 32 (or Statistics 11)
Perspective (1 course)

Sophomore year
Biology core (52, 53, 54)
Language 4
Chemistry 61, 41, 41L, 62, 62L
Perspective (1 course) Physical education (1 course)

Junior year
Biology electives (3 courses)
Physics 24, 25 (or 26, 27)
Perspectives (3 courses)
Physical education (1 course)

Senior year
Biology electives (2 courses)
Natural science or Biology electives (2 courses)
Perspectives (2 courses)
Free electives as needed to complete 123 academic hours

Bachelor of Arts in Biology
This program is designed to provide greater flexibility than the B.S. in meeting broad student interests. It provides ample opportunities to gain a sound background in biology while affording greater freedom of choice for allied science and nonscience electives. Students planning on postgraduate training should consider the B.S. program, or, if electing the B.A., should make sure that sufficient mathematics, chemistry, and physics are taken to meet entrance requirements for the postgraduate program they select. Students electing a double major (see below) must take the B.A. in both biology and the second major of choice.

B.A. requirements include the following General Education and Perspective Courses:

English 11, 12, and Foreign Language through 3;

French, German, Russian, or other modern foreign language is recommended.

Math 10 plus one Mathematical Science elective chosen from: Mathematics 22, 30, 31, 32, Computer Science 14, Statistics 11, 23.

Foreign Language 3 unless Foreign Language 4 is used to satisfy the General College requirement.

Chemistry 11-11L, 21-21L, and Biology 11-11L (or advanced placement for it).

Perspectives (nonscience), 7 courses to include: 1 Philosophical, 2 Aesthetic, 2 Social Science, and 2 Western/Non-Western Comparative courses to be selected from approved lists.

Physical Education, 2 units (do not count toward units for graduation).

Major, Required Science, and Nonscience Perspectives including:

Biology Major, no fewer than 7 courses beyond 11- 11L; among these must be: Core courses 52, 53, 54, and one of the following: 41, 43, 51, 63-63L, 72-72L, 73-73L, 80-80L, 103, 105, 111, 114-114L, or 134-134L; of the three remaining courses, one must be with laboratory, and one must be numbered above 100.

Other Required Courses, 4 courses which may be additional biology, natural science, or math courses.

Perspective or Capstone (nonscience) electives, 3 courses to include: 1 Philosophical, 1 Aesthetic, 1 Social Science, 1 Western/Non-Western Comparative course selected from approved lists.

In selecting required science electives, B.A. majors should give special consideration to Physics 24, 25, Chemistry 41-41L, 61, 62-62L, Mathematics 31, 32 which are required for admission to most Medical, Dental, Veterinary, and Biological graduate programs. Other selections of value deserving consideration are Computer Science 14, Statistics 11, and Geology 41, 42.

Suggested program of study for B.A. majors:

Freshman year
Biology 11, 11L
English 11, 12
Language 2, 3
Chemistry 11, 11L, 21, 21L
Mathematics (1 or 2 courses as required)
Perspective (1 course)

Sophomore year
Biology core (52, 53, 54)
Natural science electives (2 courses)
Perspectives (4 courses)
Physical education (1 course)

Junior year
Biology electives (2 courses)
Natural science electives (2 courses)
Perspectives (2 courses)
B.A. Perspectives (2 courses)
Physical education (1 course)
Free electives (2 courses)

Senior year
Biology electives (2 courses)
B.A. perspective (1 course)
Free electives as needed to complete 120 academic hours

Departmental Advisers for Majors
Second semester sophomores electing either the B.S. or B.A. majors in Biology will be assigned to an adviser for Biology majors in the College of Arts and Sciences plus a departmental faculty adviser. In both degree programs, approval of electives in biology and allied sciences by departmental advisers is required to assure adequate preparation for advanced courses and career goals.

Special Undergraduate Opportunities in Biology
During the second semester of the sophomore year, or later, students with a grade point average of 3.0 or higher in Biology courses are encouraged to consult with their Departmental Adviser concerning the following special programs of study and research experience.

Double major programs with B.A.s in Biology and another department in the College of Arts and Sciences. To complete a double major program, one must satisfy the minimum requirements of both departmental degrees. Double majors are most easily completed with combined B.A.s in Biology and Chemistry; however, double majors can be taken with the choice of any two departmental programs for the B.A. in the College of Arts and Sciences. A double major cannot be arranged within the same department, or between Biology and any department outside the College (e.g., in the Schools of Dentistry, Medicine, Pharmacy, Public Health, etc.).

Undergraduate Laboratory Teaching Internships and Assistantships (see Biology 90, 91). Opportunities for experience in preparation of laboratory materials and instruction in undergraduate laboratories are available for a select group of students in laboratory courses of the department. Persons interested in this experience must have had the course in question, and should contact the instructor or laboratory coordinator for the course, or get approval from the departmental Director of Undergraduate Studies, or the Department Chair.

Research in Biology for Undergraduates (Biology 98, 99). The prerequisites and requirements are outlined in the description of courses. Also, information is available from advisers, or in the departmental office on opportunities for noncredit research participation in faculty laboratories.

B.S. or B.A. in Biology with Honors (Biology 99). Candidates for honors or highest honors must secure approval in the junior year from the departmental Honors Adviser, and must have the approval of a biology Faculty Research Director. Students must register for at least six hours of research (Biology 98, 99); must maintain a grade point average in Biology courses of 3.4 or higher at graduation; must write a research paper on original findings; and must complete all other degree requirements. In addition, for a B.S. or B.A. with Highest Honors, one must also have a grade point average of 3.85 or higher in Biology courses, and in addition to other honors requirements, must present the research as an oral paper at a scientific meeting or public symposium arranged by the Department of Biology.

Directed Reading, Special Topics, and Senior Seminars (Biology 92, 95, 96, 199, see also the note following 199). Descriptions of these plans for advanced or independent study are given in the statements of course content.

Other Career Opportunities. Those who plan careers in Health Sciences including Dentistry, Medicine, and Veterinary Medicine should register with the Premedical-Predentistry-Preveterinary placement office in the College of Arts and Sciences, and should arrange for letters of reference from knowledgeable faculty in the Biology Department. Those who plan to teach in public schools should see the requirements for Science Teacher Programs under the School of Education. Special courses in Marine Science are offered through the Department of Biology, Curriculum in Marine Science, and the Institute of Marine Science, Morehead City, N.C.

Undergraduate Awards
The Henry VanPeters Wilson Award, established in 1976, honors Professor H.V. Wilson, first Chair of the Department of Biology at UNC-Chapel Hill. It is given annually to the senior honors student in biology whose research in molecular-cellular biology is judged by a faculty committee to be the most outstanding. The recipient receives a monetary award and personal plaque, and his or her name is inscribed on a plaque displayed in Coker Hall.

The Robert Ervin Coker Award, established in 1976, honors Professor R.E. Coker, a pioneer American ecologist and member of this department for many years. This award is given annually to the senior honors student in Biology whose research in organismal biology and ecology is judged to be the most outstanding by a faculty committee. The award includes a monetary gift and personal plaque, and the recipient's name is inscribed on a plaque displayed in Coker Hall.

The John N. Couch Award, established in 1986, honors the late John N. Couch, outstanding mycologist, Kenan Professor of botany and member, National Academy of Science. This award is given annually to the senior honors student with interests in plant biology who has demonstrated the highest ideals of scholarship and research. The award includes a monetary gift and personal plaque, and the recipient's name is inscribed on a plaque in Coker Hall.

The Irvine R. Hagadorn Award, established in 1981, honors Professor I.R. Hagadorn, teacher and student adviser in the department from 1962 until 1981. This award is given annually to the junior in Biology with the highest overall scholastic average. The award includes a monetary gift and personal plaque, and the recipient's name is inscribed on a plaque displayed in Coker Hall.

The Francis J. LeClair Award, established in 1974, honors the late Francis J. LeClair, renowned horticulturist and for many years University Landscape Architect. This award is presented annually to the outstanding member of the graduating class who has majored in Biology with a specialization in Botany. The award includes a monetary gift and personal plaque, and the recipient's name is inscribed on a plaque displayed in Coker Hall.

Minor in Biology
A student may minor in Biology by taking four courses (14 - 16 credits total) distributed as follows:
Two of the three Biology core courses (52, 53, 54).

One Biology course with laboratory.

One Biology course numbered above 100.

Biology 11 and 11L may not be used to satisfy these requirements.

Courses for Undergraduates Only

Stated prerequisites are understood to mean "or equivalent" and may be waived by the course instructor for students who are adequately prepared.

NOTE: Biology 11-11L is the prerequisite for most advanced work in Biology. However, entering Freshmen may place out of Biology 11-11L by either: (1) scoring 3 or higher on the Biology Advanced Placement examination prior to registration, or (2) by taking and passing the Department of Biology placement test during orientation week. Qualified students may thus waive Biology 11-11L and proceed directly to higher biology courses for which it is a prerequisite.

9 Freshman Seminar (3). No prerequisite. Does not count toward major. Limited to freshmen. The subject changes with each offering and will deal with topics of current interest in Biology. Three discussion hours a week. (On demand). Staff.

10 Issues in Modern Biology (3). For students not majoring in biology. (Students who have taken any other course in the Biology Department may not register for this course.) Recent advances in the understanding of major principles in biology. Emphasis to include the relevance and application of such advances to humans, society, and the environment. Three lecture hours a week. Fall and spring. Staff. (GC Natural Sciences (no lab) perspective.)

11 Principles of Biology (3). Open to all undergraduates. Prerequisite to most higher courses in biology. An introduction to the fundamental principles of biology, including cell structure, chemistry and function, genetics, evolution, adaptation, and ecology. (See Note above concerning Advanced Placement examination.) Three lecture hours a week. Fall, spring and summer. DeSaix and Staff.

11L Introductory Biology Laboratory (1). Corequisite or prerequisite, Biology 11. An examination of the fundamental concepts in biology with emphasis on scientific inquiry. Biological systems will be analyzed through experimentation, dissection, and observation. Three laboratory hours a week. Fall, spring, and summer. DeSaix and Staff.

41 Plant Biology (4). Prerequisites, Biology 11, 11L. Designed for students with an interest in natural sciences. An introduction to the principles of botany including structure, function, reproduction, heredity, environmental relationships, evolution, and classification of plants. Three lectures and three laboratory hours a week. Spring. Gensel, Hommersand.

43 Local Flora (4). Prerequisites, Biology 11, 11L. Open to all undergraduates. Recognition and identification of vascular plants with emphasis on the use of keys and other identification devices. Two lecture and four laboratory hours a week. Spring. Massey.

44 Economic Botany (3). Sophomore elective. A survey of the uses and economic aspects of plants and plant products in our present-day society, including horticultural, agricultural, and forest plants and the uses of plant materials in industry. Spring. Bell.

45 Fundamentals of Human Anatomy and Physiology (3). Prerequisites, Biology 11, 11L. Basic structure and function in the human body and their explanation by principles of embryology, histology, heredity, and evolution. Three lectures hours a week. (NOTE: Students will not be allowed to receive credit for this course and Biology 62.) (For laboratory, see Biology 63L.) (For laboratory, see Biology 63L.) Fall, spring, and summer. Bynum and Staff.

46 Biology of the Fungi (3). Prerequisites, Biology 11, 11L. A review of fungi and mycetozoans. Their life cycles, uses in genetic and developmental research, ecological importance, industrial uses, and importance as plant, animal, and human pathogens. (On demand). Staff.

47 Horticulture (4). Prerequisite, Biology 11. The cultivation, propagation, and breeding of plants, with emphasis on ornamentals. Control of environmental factors for optimal plant growth. Laboratory exercises include plant culture, propagation, pruning, and identification of common ornamentals. Two lecture, one recitation, and three laboratory hours a week. Fall. Parks.

51 Plant Diversity (4). Prerequisites, Biology 11, 11L. A survey of the major groups of plants emphasizing interrelationships, comparative morphology, and other topics of biological importance. Culturing techniques and some field work are included. Two lecture and four laboratory hours a week. Fall. Dickison.

52 Cellular and Developmental Biology (4). Prerequisites, Biology 11, 11L. Fundamentals of cell structure and activity in relation to special functions, metabolism, reproduction, embryogenesis, and with an introduction to the experimental analysis of cell physiology and development. Three lectures and one recitation- demonstration-conference hour a week. Fall, spring, and summer. Staff.

53 Molecular Biology and Genetics (4). Prerequisites, Biology 11, 11L. Structure and function of nucleic acids, principles of inheritance, gene expression, and genetic engineering. Three lecture hours and one recitation-demonstration-conference hour a week. Fall, spring, and summer. Staff.

54 Ecology and Population Biology (4). Prerequisites, Biology 11, 11L. Principles governing the ecology and evolution of populations, communities and ecosystems, including speciation, population genetics, population regulation and community and ecosystem structure and dynamics. Three lecture and one recitation- demonstration-conference hour a week. Fall, spring, and summer. Staff.

55 Environmental Biology (3). No prerequisite. Concepts of ecology are reviewed and related to problems of human population, regulation, resource utilization and environmental pollution. Does not count toward a major in Biology. Three lecture hours a week. (On demand). Staff.

62 Introduction to Mammalian Physiology (3). Prerequisites, Biology 11, 11L. A basic course in mammalian physiology designed for preprofessional and Biology majors. The structure and function of the major organ systems will be discussed with an emphasis on system integration and body homeostasis. Three lecture hours a week. (NOTE: Students will not be allowed to receive credit for this course and Biology 45.) Fall and spring. Merrick.

62L Physiology Laboratory and Demonstration (1). Prerequisite or corequisite Biology 62. A laboratory discussion class which presents current methodology used in monitoring the function of specific organ systems. Three laboratory hours a week. Fall and spring. Koeppe.

63 Structure and Evolution of Vertebrates (3). Prerequisites, Biology 11, 11L. A history of the human body with emphasis on evolutionary history of vertebrates and anatomical evolution of organ systems. Three lecture hours a week. Spring. Feduccia.

63L Vertebrate Structure and Evolution Laboratory (1). Prerequisite, or corequisite, Biology 45 or 63. Vertebrate comparative anatomy of organ systems and their evolution with emphasis on human anatomy. Three laboratory hours a week. Fall, spring, and summer. Bynum.

72 Vertebrate Field Zoology (3). Prerequisites, Biology 11, 11L. Introduction to the diversity, ecology, behavior and conservation of living vertebrates. Three lecture hours a week. Fall. Wiley.

72L Vertebrate Field Zoology Laboratory (1). Corequisite, Biology 72. Study of a diversity of vertebrates in the field. Three laboratory and field hours a week, including two weekend trips. Fall. Wiley.

73 Animal Behavior (3). Prerequisites, Biology 11, 11L. An introduction to animal behavior, with emphases on the diversity and adaptation of behavior in natural conditions. Three lecture hours a week. Fall and spring. Mueller, Wiley.

73L Animal Behavior Laboratory (1). Prerequisite, or corequisite, Biology 73. Techniques of observation and experiments in animal behavior. Three laboratory hours a week. Fall and spring. Mueller, Wiley.

78 Evolution and Man (3). Prerequisite, Biology 11, or one course in biological science. A survey of history, mechanisms, and evidences for organic evolution; the origin and diversity of animal life in time and space; and the place of man in nature. Three lecture hours a week. Fall or spring. Staff.

80 Biology of Insects (3). Prerequisites, Biology 11, 11L. Study of insects with emphasis on physiology, ecology, and behavior. Three lecture, discussion, and demonstration hours a week. Spring. Staff.

80L Biology of Insects Laboratory (1). Prerequisite, or corequisite, Biology 80. Identification of insects and laboratory studies in insect physiology, ecology, and behavior; student projects in insect biology. Three laboratory hours a week and field collections. Spring. Staff.

90 Laboratory Intern in Biology (1 P/F). Prerequisites, 3.0 or higher in course in question and all Biology work, and permission of the instructor. Experience to include laboratory preparations, demonstrations, assistance, and attendance at weekly laboratory preparation meetings for the course. Interns will not be involved in any aspects of grading in the course. May be repeated with credit. Three laboratory hours a week. Fall and spring. Staff.

91 Laboratory Teaching Assistant in Biology (2 P/F). Prerequisites, 3.0 or higher in course in question and all Biology work and permission of the instructor and the Chair. Experience and duties to include attendance at weekly laboratory preparation meetings for the course, laboratory preparations, demonstrations, instruction, and grading in one section of laboratory course. May be repeated with one credit. Three laboratory hours a week. Fall and spring. Staff.

92 Senior Seminar (1). Prerequisite, faculty recommendation. Offered to seniors for more detailed and comprehensive exposure to unifying principles in Biology. Discussions and analyses of selected topics by students. Three seminar hours a week. (On demand). Staff.

94B Milestones in Biology and Medicine (3). No prerequisite. Introductory biology is recommended. The illnesses and infirmities of mankind have resulted in personal tragedies, scientific puzzles and regional disasters. The biological basis, cultural associations and medical responses to major health problems from ancient times to the present will be considered. Spring or summer. Misch.

95 Directed Reading (2 - 4). Prerequisite, permission of the staff. Extensive and intensive reading of the literature of a specific biological field directed by an appropriate member of the faculty. Written reports on the readings, or a literature review paper will be required. Offered on demand. Each semester. Staff.

96 Special Topics (2 or 3). Prerequisite, permission of the staff. An undergraduate seminar course devoted to consideration of pertinent aspects of a selected biological discipline. Offered on demand. Each semester. Staff.

98 Undergraduate Research (Var). Prerequisites, Biology 11, 11L, an overall 3.0 grade point average, and permission of a faculty research director. Open to juniors and seniors. Directed readings with laboratory study on a selected topic. A final written report is required in each term. May be repeated. Biology 98 credit from 3 to 5 hours may be counted as one lecture course in the major; or 6 hours and more of 98, or 98 and 99 credit, can be counted as a lecture course with a laboratory in the major. Fall, spring, and summer. Staff.

99 Senior Honors Thesis (4). Prerequisites, 3 credit hours of Biology 98, and permission of a faculty research director. See also the description of Honors and Highest Honors under Special Undergraduate Opportunities in Biology in the statement preceding course descriptions. Required of all candidates for Honors or Highest Honors in their senior year. Spring. Staff.

Courses for Graduates and Advanced Undergraduates

The stated prerequisites should be interpreted to read "or equivalent" and may be waived by the course instructor for students who are adequately prepared.

101 Structure, Function and Development of Plants (4). Prerequisites, Biology 52 or 53. A modern approach to growth, development, differentiation and physiological processes in plants. Three lecture and three laboratory hours a week. Spring. Jones, Hommersand.

103 Introduction to Plant Taxonomy (4). Prerequisites, Biology 11, 11L. Introduction to the taxonomy of vascular plants. Principles of classification, identification, nomenclature, and description. Laboratory and field emphasis on phytography, families, description, identification, and classification of vascular plant species. Three lecture and three laboratory hours a week. Fall. Massey, Chase.

104 Vertebrate Embryology (3). Prerequisite, Biology 45 or 52. Principles of development with special emphasis on gametogenesis, fertilization, cleavage, germ layer formation, organogenesis, and mechanisms with experimental analysis of developmental processes. Three lecture hours a week. Fall or spring. Harris.

104L Vertebrate Embryology Laboratory (1). Prerequisite or corequisite, Biology 104. Descriptive and some experimental aspects of vertebrate development. Three laboratory hours a week. Fall or spring. Harris.

105 Invertebrate Zoology (4). Prerequisites, Biology 11, 11L and one additional course in Biology. An introduction to the major invertebrate phyla emphasizing the morphology, behavior, classification, and ecology of marine invertebrates. Three lecture and three laboratory hours a week. Spring. Lohmann.

106 Advanced Invertebrate Zoology (4). Prerequisites, Biology 11, 11L, and 105. The biology of animals in the minor invertebrate phyla with emphasis on interrelationships of all phyla. Three lecture and three laboratory hours a week. Spring. Staff.

108 Microbiology (3). Prerequisites, Biology 53 or consent of the instructor. Bacterial form, growth, physiology, genetics and diversity. Bacterial interactions including symbiosis and pathogenesis (animal and plant). Use of bacteria in biotechnology. Brief introduction to fungi and viruses. Spring. Matthysse.

108L Microbiology Laboratory (1). Prerequisite or corequisite, Biology 108. Sterile technique, bacterial growth and physiology, bacterial genetics, bacteriophage, and bacterial diversity. Spring. Matthysse.

109 Introduction to Hydrobiology (4). Prerequisite, Biology 54 or 105. A study of the biology of aquatic organisms with emphasis on freshwater communities. Two lecture and six laboratory and field hours a week. On occasion. Staff.

110 Invertebrate Paleontology *(Geology 132)* (4). Prerequisites, Geology 16 or Biology 11; or permission of the instructor. A survey of the major invertebrate phyla represented in the geologic record, with emphasis on broad skeletal morphology, evolutionary trends, ecology, and biostratigraphic significance. Three lecture and two laboratory hours a week. Fall. Carter.

111 Algae *(Marine Science 111)* (4). Prerequisites, Biology 11, 11L. An introduction to the identification, biology, ecology, and evolution of the algae. Two lecture and four laboratory hours a week. Spring. Hommersand.

113 Marine Algae *(Marine Sciences 113)* (4). Prerequisites, Biology 11, 11L. Structure, reproduction, systematics and ecology of marine algae. The laboratory will include field studies and culture techniques. Two lecture and four laboratory hours a week. Spring. Hommersand.

114 Avian Biology (3). Prerequisites, Biology 11, 11L, and one additional course in Zoology. A study of avian evolution, zoogeography, migration patterns, behavior, food and feeding habits, and a survey of the families of birds of the world with emphasis on North Carolina avifauna. Three lecture hours a week. Fall. (Alternate years, or on demand.) Feduccia.

114L Avian Biology Laboratory (1). Prerequisite or corequisite, Biology 114. Avian anatomy, field biology, and a study of the birds of North Carolina. Three laboratory hours a week. Fall. (Alternate years, or on demand.) Feduccia.

116 Population Biology (3). Prerequisite, Biology 54. Introduction to the ecological and genetic properties of populations, and the mechanisms of persistence and evolution of populations. Three lecture hours a week. Fall or spring (alternate years). Stiven.

118 Comparative Animal Histology (4). Prerequisites, Biology 52 and one biology with laboratory. Study of cells, tissues and organ systems from selected examples of vertebrates and invertebrates to reveal unity and diversity of structure and function. Comparative structure and physiology will be emphasized. Two lecture and six laboratory hours a week. Spring. Misch, Kier.

120 Comparative Physiology (3). Prerequisites, Biology 11, 11L. One course in physiology is recommended. An examination of the physiology of animals using a comparative approach. Both invertebrate and vertebrate physiology will be included with an emphasis on "whole- animal" physiology. Fall or spring. Kier.

120L Comparative Physiology Laboratory (1 to 3). Corequisites, Biology 120, and permission of the instructor. Instrumentation and techniques in comparative physiology. Hours and credits by prior agreement (with two to three laboratory hours a week per unit credit). Fall or spring. Kier.

121 Introduction to Neurobiology (3). Prerequisite, Biology 52 and 53. Survey of neurobiological principals in vertebrates and invertebrates, including development, morphology, physiology, and molecular mechanisms. Three lectures a week. Spring. Bollenbacher.

122 Human Genetics *(Genetics 122)* (3). Prerequisite, Biology 53. Pedigree analysis, inheritance of complex traits, DNA damage and repair, human genome organization, DNA fingerprinting, the genes of hereditary diseases, chromosomal aberrations, cancer and oncogenes, immunogenetics and tissue transplants. Three lecture hours a week. Spring 1993 and alternate years. Maroni.

123 Pathogenic and Symbiotic Interactions of Plants with Microorganisms (3). Prerequisite, Biology 108 or equivalent. Pathogenic and symbiotic interactions of viruses, bacteria, and fungi with plants. Emphasis on molecular aspects. Fall. Matthysse.

124 Plant Biochemistry (3). Prerequisite, Chemistry 61. Study of carbohydrates, lipids, N fixation, NO_1 and NO_3 reduction, pigments, photosynthesis, and respiration in plants. (On occasion.) Domnas.

125 Plant Physiology and Biochemistry *(Biochemistry 125)* (3). Prerequisites, Biology 11, and 41 or 52. An advanced course covering growth of plants including photosynthesis, nitrogen fixation, and biosynthesis of cellular components; developmental processes; hormonal regulation; and responses to stress. (On demand). Staff.

126 Oceanography *(Marine Science 101; Environmental Science 127; Geology 101)* (3). Prerequisites, Biology 11, Chemistry 21, and Physics 25, or permission. An interdisciplinary study of the sea and the interrelationship of marine processes. Three lecture hours a week. Fall. Neumann. Spring. Frankenberg.

128 Topics in Membrane Biology (3). Prerequisites, Biology 52 and Chemistry 62, or permission of the instructor. The structure and function of various biological membranes. Three lecture and discussion hours a week. Fall. (Alternate years.) Misch.

129 Laboratory in Cell Biology (4). Prerequisites, Biology 11 and 52. Application of modern techniques to the study of cell biology, use of spectrophotometers, electrophoresis and other laboratory instruments, as applied to real systems. One lecture and three laboratory hours a week. Fall and spring. Domnas, Jones.

130 Introduction to Biological Chemistry *(Chemistry 130)* (3). Prerequisites, Chemistry 62, 62L; Biology 11. The study of cellular processes including catalysis, metabolism, bioenergetics, and biochemical genetics. The structure and function of biological macromolecules involved in these processes will be emphasized. Spring. Biological chemistry faculty.

131 Endocrinology (3). Prerequisites, Biology 52 or 62. Principles of neuroendocrine and endocrine systems of vertebrates and selected invertebrates with consideration of the anatomy and physiology of glands of internal secretion. Hormone chemistry and interendocrine relationships are also emphasized. Three lecture hours a week. Spring. Bollenbacher.

132 Evolutionary Mechanisms (3). Prerequisites, Biology 11, 11L. A broad survey of the biological interactions and mechanisms of organic evolution with special emphasis on the evolutionary effect of environmental changes, and genetic variations contributing to evolution. Spring. Bell.

133 Floristics (4). Prerequisite, Biology 103 or equivalent. Primarily field and laboratory identification of special groups; aquatic and marsh plants, trees and shrubs, grasses and sedges, composites, ferns and fern allies, seasonal flora. One lecture and six laboratory hours a week. Fall. Staff.

134 Invertebrate Development and Evolution *(Marine Sciences 134)* (3). Prerequisites, Biology 11, 11L. A survey of diversity in animal development and life cycles with emphasis on free-living marine invertebrates. Three lecture hours a week. Fall. (Alternate years.) Staff.

134L Invertebrate Development Laboratory *(Marine Sciences 134L)* (1 or 2). Prerequisite or corequisite, Biology 134. Laboratory experience in obtaining, culturing, and identifying embryonic, larval, and planktonic materials, with emphasis on free-living marine forms. Three scheduled laboratory hours a week; or, with special permission, three or more additional hours a week on an independent project for one additional unit of credit, with 134. Staff.

135 Taxonomy of Special Groups of Nonvascular Plants (2 - 6). Prerequisite, Biology 51. Field and laboratory identification and classification of special groups of nonvascular plants: 135a Aquatic Phycomycetes; 135b Marine fungi; 135c Fleshy fungi; 135d Mycetozoans; 135e Marine algae; 135f Freshwater algae. Nine laboratory hours a week. Fall and summer. Staff.

139 Hormones And Evolution *(Biochemistry 139)* (2). *Prerequisite,* Biochemistry 100 or Biology 52 or Biology 53 or equivalent. An introduction to the chemistry of hormones and the biochemical mechanisms underlying their biological actions in an evolutionary perspective with emphasis on unifying concepts. Spring. Pearlman.

140 Biological Oceanography *(Marine Sciences 104; Environmental Sciences 136)* (4). Prerequisite, Biology 54 or 105 or permission. Physical, chemical, and biological factors characterizing estuarine and marine environments emphasizing factors controlling animal and plant populations including methods of analysis, sampling, and identification. Three lecture and two laboratory hours a week. Summer. Staff.

141S Special Problems in Marine Biology *(Marine Sciences 141S)* (3 to 6). Prerequisite, Biology 140 and/or permission of instructor. Comprehensive survey of problems and laboratory methods in any of the following areas: Mollusca (Chestnut), Vertebrate (Fahy, Schwartz), Fungi (Kohlmeyer), Ecology (Peterson). Hours and credits by prior agreement (with five or more laboratory and conference hours a week per unit credit), first or second summer terms (offered on demand at Morehead City, N.C.). Staff of Institute of Marine Sciences.

142 Plant Ecology (4). Prerequisite, Biology 54. Consideration of terrestrial, vascular plant ecology including environmental physiology, population dynamics, and community structure. Laboratory stresses collection and interpretation of field data. Three lecture and three laboratory hours a week. Fall. (Alternate years.) Peet.

143 Ecological Plant Geography *(Geography 143)* (3). Prerequisite, Biology 11 or Geography 10. Description of the major vegetation types of the world including their distribution, structure, and dynamics. The principal causes for the distribution of plant species and communities, such as climate, soils, and history will be discussed. Fall. (Alternate years.) Peet.

144 Developmental Biology (3). Prerequisites, Biology 52 or 53 and Chemistry 61. An experimental approach to an understanding of animals and plants. The approach covers developmental processes, molecular, genetic, cell biological and biochemical techniques, with an emphasis on the molecules involved in development. Spring. Gilbert, Harris.

145 Hypothesis Testing in Ecology (3). Prerequisites, Biology 54 and permission of the instructor. A discussion of how ecological theories are constructed and how they should be tested. The nature of hypotheses, the promulgation of null hypotheses, and the use of specific experiments will be covered. Three lecture hours a week. Spring. (Alternate years.) Staff.

146 Marine Ecology *(Marine Sciences 146)* (3). Prerequisite, Biology 54 or 105 or permission of the instructor. An introductory study of oceanography as it pertains to the ecology of marine organisms. Three lecture hours a week. Spring. (1986 and alternate years.) Peterson.

147 Field Ecology (4). Prerequisites, Biology 54. Application of ecological theory to terrestrial and/or freshwater systems. Lectures will acquaint students with these systems and emphasize quantitative properties of interacting population and communities within them. The required laboratory will teach techniques and methodology applicable for analysis of these systems. Individual and group projects will emphasize experimental testing of ecological theory in the field. Two lecture and six field hours a week. Fall or spring of alternate years. Reice, Staff.

148 Freshwater Ecology (3). Prerequisite, Biology 54. Physical, chemical, and biological factors influencing the structure and function of biological communities in lakes and reservoirs. Three lecture hours a week. Fall or spring. (Alternate years.) Smith.

148L Freshwater Ecology Laboratory (1). Prerequisite or Corequisite, Biology 148 and permission of the instructor. Laboratory and field methods in freshwater ecology, including water chemistry, photosynthesis and respiration measurements, and sampling and identification of freshwater biota. Three laboratory hours a week. Fall or spring. (Alternate years.) Smith.

149 Ecosystem Structure and Function (3). Prerequisite, Biology 54 or a course in limnology or geochemistry. Pattern and process in natural ecosystems, with stress on comparative approaches to ecosystems and analysis. Topics include primary and secondary productivity, nutrient cycling, and the biogeochemistry of aquatic and terrestrial ecosystems. Three lecture hours a week. Fall or spring. (Alternate years.) Smith.

149L Ecosystem Structure and Function Laboratory (1). Corequisites, Biology 149 and permission of instructor. Use of data to generate empirical models of ecosystem patterns or processes. Individual research projects. Three laboratory hours a week. Fall or spring. (Alternate years.) Smith.

150 Animal Societies and Communication (3). Prerequisite or corequisite, Biology 73. Comparative review of animal societies; diversity of social structure, social dynamics, communication, ecology, and evolution of social organization. Three lecture hours a week. Spring. (Alternate years.) Wiley.

151 Behavioral Ecology (3). Prerequisites, Biology 54 or 73. Behavior as an adaptation to the environment. Evolution of behavioral strategies for survival and reproduction. Optimality, and "games that animals play." Three lecture hours a week. Fall. (Alternate years.) Mueller.

152 Plant Anatomy (5). Prerequisite, Biology 51. Introduction to the development and comparative anatomy of vascular plants. Practice in methods of anatomical microtechnique. Three lecture and four laboratory hours a week. Spring. Dickison.

153 Comparative Morphology of Vascular Plants (5). Prerequisite, Biology 51. Comparative morphology and evolutionary relationships of the Tracheophyta. Both living and fossil forms will be considered. Three lecture and four laboratory hours a week. Spring. Gensel.

154 Neuroethology (3). Prerequisite, Biology 52 or permission. The neurobiological basis of animal behavior at the level of single cells, neural circuits, sensory systems, and organisms. Lecture topics range from principles of cellular neurobiology to ethological field studies. Fall (alternate years). Lohmann.

155 Comparative Biomechanics (3). Prerequisites, Biology 11, 11L, Physics 24 and 25 recommended. Principles of fluid and solid mechanics applied to a variety of biological systems. Both invertebrates and vertebrates will be included. Fall. Kier.

156 Marine Invertebrate Field Zoology (4). Prerequisites, Biology 105 or 134, and permission of the instructor. Biological aspects of selected groups of marine invertebrates (especially of the North Carolina coast) with assistance from visiting specialists. Content will change with each offering and the course may be repeated with credit. Three lecture and three laboratory hours a week, with two weekend field trips to North Carolina coast, one three-day cruise on the research vessel, Cape Hatteras, and one field trip to the Florida Keys during spring recess. (On occasion.) Staff.

157 Problems in Vertebrate Evolution *(GEOL 157)* (3). Prerequisites, Biology 63 or permission of the instructor. A study of the major transitions in vertebrate evolution and associated problems in evolutionary biology, structural change, paleoecology, biogeography and earth history, physiology and behavior. Fall. Feduccia.

158 Evolutionary Patterns (3). Prerequisites, Biology 54 and permission of the instructor. Discussion of current problems and recent advances in our understanding of evolution, including the relationship between ecological processes and the predictability of evolution. Three lecture hours a week. Spring. Staff.

160 Developmental Genetics (3). Prerequisite, Biology 53. The genetic control and molecular basis for gene expression during development. Three lecture hours a week. Spring. Bautch, Peifer.

161 Principles of Genetic Analysis *(Genetics 112)* (3). Prerequisite for undergraduates, Biology 53. For graduate students, an undergraduate genetics course or permission of instructor. Analysis of recombination and other genetic interactions in prokaryotes, eukaryotes and viruses. Spring. Petes, Lucchesi, Bott.

163 Laboratory Experiments in Genetics (4). *Prerequisite, Biology 53.* Experiments using a range of organisms from bacteria to Drosophila, higher plants and man to sample organismal and molecular genetics. One lecture hour, four laboratory hours. Spring. Parks and Staff.

164 Molecular Biology (3). Prerequisites, Chemistry 61 and Biology 53. Emphasis is on prokaryotic molecular biology, plasmids l phage and single strand phages. Three lecture hours a week. Fall. Stafford.

165 Plant Molecular Biology (3). Prerequisite, Chemistry 61. Molecular aspects of plant growth and development. Emphasis on embryogenesis, light regulated genes, developmentally regulated multi-gene families, transposable elements, organellar genomes, nitrogen fixation, genetic engineering, vira, and viroids. Fall. Staff.

166 Unsolved Problems in Cellular Biology (3). Prerequisite, Biology 52 or 53. A survey of areas of current interest in cytology, embryology, and genetics with concentration on problems which remain unsolved, but which appear to be near solution. Three lecture and discussion hours a week. Spring, 1989 and alternate years. Harris, Pukkila.

167 Advanced Cell Biology (3). Prerequisites, Biology 52 and 53. An advanced course in cell biology, with emphasis on the biochemistry and molecular biology of cell structure and function. Three lecture hours a week. Fall. Matson, Kay.

168 Biophysical Cytology (3). Prerequisite, Biology 52. Emphasis on theory and application of analytical and quantitative methods in light and electron microscopy; molecular and structural probes of dynamic changes in organization in living cells. Three lecture and demonstration hours a week. Spring. (Alternate years.) Salmon.

168L Biophysical Cytology Laboratory (3). Prerequisites or corequisites, Biology 168 and permission of the instructor. Laboratory experience in quantitative polarization, interference and fluorescence microscopy; photometry, video recording techniques and methods in micromanipulation and microinjection. Each student will develop an individual research project. Six laboratory hours a week. Fall or spring. Salmon.

171 Molecular Biology Techniques (4). Prerequisite, permission of instructor; Biology 164 recommended. Experiments with bacterial phage, nucleic acid isolation and properties, recombinant DNA techniques and DNA sequencing. Additional hours in laboratory will be necessary to complete assignments. Spring. Stafford.

172 Cytogenetics *(Genetics 172)* (3). Prerequisite, Biology 53. Critical study of research papers concerned with the behavior and organization of chromosomes. Three lecture hours a week. Fall 1987 and alternate years. Barry.

173 Plant Genetics and Speciation (3). Prerequisite, Biology 53. Mendelian genetics of vascular plants, with emphasis on genetic phenomena characteristic of vascular plants and the role of heredity in speciation. Fall. (Alternate years.) Parks and Matthysse.

174 Advanced Physiology (3). *Prerequisites, Biology 62 or 120 and permission of the instructor.* Topics in various areas of physiology. The topics will vary from year to year. May be repeated with credit. Three discussion hours a week. Fall or spring (on demand). Koeppe.

175 Special Topics (3). Prerequisite, permission of the instructor. Lectures by visiting faculty. Topics will change with each offering; may be repeated for credit. Three lecture and discussion hours a week. Fall or spring. (On occasion.) Visiting Staff.

176 Cell Physiology (3). Prerequisite, Biology 11, 52, Chemistry 61. Bioenergetics, enzymes, membranes, transport and diffusion, mitochondria, chloroplasts, macromolecules, bioelectricity, endocytobiology, photoreceptors, molecular aspects of vision, taste and smell. Three lecture hours a week. Spring. Domnas.

176L Cell Physiology Laboratory (1). Pre- or corequisite, Biology 176. The laboratory portion will stress the approach of studies on selected problems in a quasi independent manner. Three laboratory hours a week. Spring. Domnas.

177 Nuclear and Cytoskeletal Aspects of Cell Division (3). Prerequisites, Biology 52 and 53. An advanced course in cell and molecular biology integrating genetic, biochemical, and structural aspects of nuclear and cytoskeletal events. Spring. Salmon, Bloom.

178 Advanced Molecular Biology I *(Genetics 110, Biochemistry 110, Microbiology 108, Pharmacology 136)* (3). Prerequisites, at least one undergraduate course in both biochemistry and genetics. DNA structure, function and interactions in prokaryotic and eukaryotic systems, including chromosome structure, replication, recombination, repair, and genome fluidity. Undergraduates should obtain instructor's permission before registering for this course. Fall. Griffith, Sancar, Bedinger.

179 Advanced Molecular Biology II *(Genetics 111, Biochemistry 111, Microbiology 109, Pharmacology 137)* (3). Prerequisites, at least one undergraduate course in both biochemistry and genetics. RNA structure, function, and processing in biological systems including transcription, gene regulation, translation and oncogenes. Spring. Kole, Fried, Searles.

181 Paleobotany *(Geology 197)* (4). Prerequisites, Biology 11, 11L and permission of the instructor. An introduction to the morphology, stratigraphic occurrence, and evolutionary relationships of fossil plants. Both macrofossils and microfossils will be considered. Three lecture and three laboratory hours a week. Fall. (Alternate years.) Gensel.

184 Conservation Biology (3). Prerequisite, Biology 54. The application of biological science to the conservation of populations, communities, and ecosystems, including rare species management, exotic species invasions, management of natural disturbance, research strategies, and preserve design principles. Spring. White.

185 Population Ecology (3). Prerequisite, Biology 54. An advanced treatment of topics in animal population and community ecology, stressing analytical and interpretation approaches. Topics will vary from year to year and the course may be repeated with credit. Three lecture and discussion hours a week. Fall or spring. (Alternate years.) Stiven.

185L Laboratory in Population Ecology (1). Corequisites, Biology 185 and permission of instructor. Methodology in the analysis and interpretation of population and community phenomena. Three laboratory and field hours a week. Fall or spring. (Alternate years.) Stiven.

186 Community and Systems Ecology (3). Prerequisite, Biology 54. A wholistic approach to ecology. State-space modeling of ecological processes. Other topics will vary but may include: spatial and temporal heterogeneity in communities and ecosystems; disturbance theory; decomposition; community structure and function; freshwater ecology. Fall or spring. Reice.

186L Community and Systems Ecology Laboratory (1). Prerequisite or corequisite, Biology 186. Community and/or ecosystem modeling and computer simulation. Experimental analyses and validation in the field. Individual and group projects. Three laboratory and field hours a week. Fall or Spring. Reice.

189 Nucleic Acid Techniques *(Microbiology 189, Genetics 189)* (4). Prerequisites, some molecular biology, permission of instructor. An intense course covering many aspects of recombinant DNA technology such as isolation of nucleic acids, gel analysis, Southern and Northern blotting, cloning in viruses and plasmids, and DNA sequencing. Fee required. Eight laboratory hours. Spring. Carl.

190 Frontiers in Cell and Molecular Biology (4). Prerequisites, two courses in Biology and permission of instructor. Does not count toward a major in Biology. Fall.

191 Summer Research Challenge Laboratory (4). Prerequisite, Biology 190. An intensive laboratory experience in cell, molecular, and developmental biology. To be taken after Biology 190. Does not count toward a major in Biology. Summer. Bollenbacher.

195 Field Biology at Highlands Biological Station (1 - 4). Prerequisites, Biology 11, or equivalent, or permission of instructor. Content will vary. Summer field biology at the Highlands Biological Station will generally focus on the special faunal and floristic processes and patterns characteristic of the southern Appalachian mountain region. Five lecture and three to five laboratory and field hours per week, depending on credit. Summer. Staff.

199 Senior Seminar (2). Prerequisites, or corequisites, Biology 98 or 99, or a B average in previous Biology courses, and permission of the instructor. Presentation and discussion of research papers of current interest. May not be counted to satisfy a major course requirement for the B.A. or B.S. in Biology. Two hours a week. Fall and spring. Staff.

With approval of the instructor and the Graduate School, Biology majors with at least a B average in Biology courses, who need fewer than fifteen hours to complete the bachelor's degree, may take one or two courses at the 200-level for the purpose of later receiving graduate credit.

Department of Biomedical Engineering

Carol L. Lucas, *Chair*

The following courses are open to undergraduate students majoring in Applied Sciences. Students interested in a major in Biomedical Engineering should consider the Computer Science option or the Biomedical Materials Science option of the Curriculum in Applied Sciences.

106 Signal Processing and Systems Characterization *(Applied Sciences 101)*(3). Prerequisite, Math 128. A broad exposure to the Fourier transforms in discrete and continuous time and their relationship to linear difference/differential equations and linear systems behavior. Spring. Quint, Charlton.

107 Modulation, Transmission, Information, Noise, and Networks *(Applied Sciences 102)*(3). Prerequisites, Mathematical maturity and familiarization with Fourier Analysis: such as contained in Math 128, Math 129, and BME 106 or BME 121. Analysis and design of communication systems and networks: coaxial, microwave, fiberoptic, and satellite. Fall. Propst.

112 Biomaterials *(Applied Sciences 161)* (3). Prerequisites, Physiology 140 or equivalent. Chemical, physical, engineering and biocompatability aspects of materials, devices or systems for implantation in or, interfacing with, the body, cells or tissues. Food and Drug Administration and legal aspects. Fall. Hanker, Kusy.

121 Digital Signal Processing I *(Applied Sciences 103)* (3). Prerequisite, Computer Science 16 or equivalent. This is an introduction to methods of automatic computation of specific relevance to biomedical problems. Sampling theory, analog-to-digital conversion, digital filtering, will be explored in depth. Spring. Lucas.

128 Analysis and Synthesis of Digital Systems *(Applied Sciences 104)* (3). Prerequisites, Physics 101, 102. Application of Boolea algebra to the analysis and synthesis of switching circuits, asynchronous and synchronofus machines, programmed logic arrays, and fault-tolerant design. Quint.

132 Linear Control Theory *(Applied Sciences 105)* (3). Prerequisite, Math 108 or equivalent. Linear control system analysis and design are presented. Frequency and time domain characteristics and stability are studied. Fall. Charlton, Johnson.

160 Fundamentals of Materials Engineering (3). The structure, defects, thermodynamics, kinetics, and properties (mechanical, electrical, thermal, and magnetic) of matter (metals, ceramics, polymers, and composites) will be considered. Fall. Kusy.

Department of Cell Biology and Anatomy

Charles R. Hackenbrock, *Chair*

41 Introduction to Human Anatomy (3). A general course for persons preparing for careers as dental hygienists. Two lectures and two laboratory hours a week, Fall. Montgomery.

92 Histology (2). Study of the microscopic anatomy of fundamental body tissues. For students of physical therapy. Two lecture and three laboratory hours a week for nine weeks, Fall. Koch.

93 Neuroanatomy (3). Prerequisite: permission of instructor. An introductory study of the central nervous system. Lecture and laboratory. For students of physical therapy. Spring. Montgomery.

101 Neuroanatomy *(Neurobiology 101)* (3). Overview of the central nervous system: structure, connections, and cell-to-cell interactions and communications. Fall. Rustioni.

102 Human Histology (4). Prerequisites, Biology 21, 21L. Chemistry 11A, 11L, 21A, 21L, 61, 62; Physics 24, 25, or equivalent; permission of instructor. Introduction to the study of cells, organized tissues, and organ systems at levels of the light and electron microscopes with emphasis on human material. Fall. Lemasters; staff.

104 Introduction to Medical Cell Biology (1). Prerequisites, Biology 11, 11L; Chemistry 61, 62 or equivalent; permission of instructor. Introduction to the structure and function of cell membranes, membranous organelles, the nucleus, and the filamentous components of the cytoplasm. Fall. Burridge.

105 Gross Anatomy (5). Systematic approach to gross anatomy emphasizing a regional approach stressing head and neck anatomy. Primarily for dental students. Fall. Montgomery.

106 The Cell (3). Prerequisite, permission of the instructor. Comprehensive introduction to cell structure and function. Emphasis on membrane organization, organelles, the cytoskeleton, motile phenomena, and the regulation of cell growth including cancer cell biology. Fall. Jacobson, Burridge and staff.

107ab Gross Anatomy (6). Prerequisite, permission of instructor. Primarily for medical students. Graduate enrollment by availability of space and material. One lecture, six laboratory hours, Fall; two lecture, six laboratory hours, eight weeks of spring. Henson, staff.

109 Human Development (1). Overview of normal human embryological development from fertilization to parturition with an emphasis on the origin and causes of congenital malformations. Fall. Sadler.

111fs Microscopic Anatomy (3). Lectures and laboratory classes provide an understanding of the microscopic anatomy and histology of the basic tissues and major organ systems of the human body. Primarily for dental students. Fall and spring. Peach.

120 Advanced Chordate Anatomy & Biology (5). Prerequisite, Biology 63. This course will consider vertebrate origins, diversity and evolution. The origin and evolution of the vertebrate classes are considered from the perspective of the anatomical and physiological problems encountered in the shift from one way of life to another. Fall. Lay.

121 Embryology and Developmental Biology (3). Prerequisite, permission of instructor. A comprehensive study of the mechanisms underlying morphogenesis (generation of form) including cell migration and other morphogenetic movements, cell interactions, cell differentiation and growth regulation. Spring. Sadler.

122 Developmental Neurobiology *(Neurobiology 122, Physiology 122)* (3). Prerequisite, permission of instructor. A comprehensive overview of nervous system development including detailed analysis of selected research topics. Spring. Lauder. (1993 and alternate years.)

123 Developmental Toxicology and Teratology *(Toxicology 123)* (2). Prerequisites, basic biology and permission of the instructor. A review of aspects of development which are particularly susceptible to teratogenic insults. Mechanisms by which teratogens affect development will be emphasized. Spring. Sulik. (1992 and alternate years).

191 Gross Anatomy for Physical Therapists *(Physical Therapy 191)* (6). Prerequisites Biology 63 and 63L and permission of instructor. Fundamental principles and concepts of human gross anatomy for physical therapists taught by lectures and cadaver dissection. Emphasis on functional anatomy. Three lecture and six laboratory hours a week. Fall. Lay.

193 Functional Neuroanatomy *(Physical Therapy 193)* (3). Prerequisites, Cell Biology and Anatomy 191, Cell Biology and Anatomy 107 or equivalent, and permission of instructor. Study of basic structure of the brain and spinal cord, including both lecture and laboratory. Primarily for physical therapy students. Four hours a week, spring. Montgomery.

Department of Chemistry

Joseph L. Templeton, *Chair*

B.A. Degree with a Major in Chemistry

Students must meet the General Education requirements of the General College and the College of Arts and Sciences; the following courses must be included:

Freshman Year
Chemistry 11, 11L and 21, 21L; or 25H, 25L
Mathematics 31 and 32

Sophomore Year
Chemistry 41 or 45H, 61 or 65H, 41L or 45L and 51, 62 or 66H, 62L or 66L
Physics 24, 24L and 25, 25L or 26 and 27

Junior and Senior Years
Chemistry 170L
Chemistry 180 or 181
Choice of two courses [11] :Chemistry 121, 130, 141, 150, 151, 171L [3] or 182

B.S. Degree in Chemistry [4]

The following courses are required:

Freshman and Sophomore Years
Chemistry 11, 11L and 21, 21L; or 25H, 25L
Chemistry 41 or 45H, 61 or 65H, 41L or 45L and 51, 62 or 66H, 62L or 66L
Biology 11
English 11 and 12
Foreign Language[5]
Mathematics 31, 32
Natural Science Courses (Mathematics 33 and 83; Physics 26 and 27)
General College Perspectives (2 courses)[6]
Physical Education (2 courses)

Junior and Senior Years
Chemistry 130, 150, and 170L
Chemistry 181, 181L, 182, and 182L
Chemistry 141 and 141L
Advanced Chemistry Electives (10 hours)[7]
General College Perspectives (2 courses)[6]
Nonscience Electives (9 hours)
Free Electives (9 hours)

B.S. Degree in Chemistry, Biochemistry Track

The following courses are required:

Freshman and Sophomore Years
Chemistry 11, 11L and 21, 21L; or 25H, 25H
Chemistry 41 or 45H, 61 or 65H, 41L or 45L and 51, 62 or 66H, 62L or 66L
Biology 11, 11L
Mathematics 31, 32
English 11 and 12
Foreign Language[5]
Natural Science Courses (Mathematics 33 and 83; Physics 26 and 27)
General College Perspectives (2 courses)[6]
Physical Education (2 courses)
Junior and Senior Years
Chemistry 130 Chemistry 136L, 170L, 181, and 182
Chemistry 181L or 182L
Biochemistry Elective (1 course)
Biology 52, 53, 62, 108, 108L
General College Perspectives (2 courses)[6]
Nonscience Electives (6 hours)
Free Electives (9 hours)[7]
Minor in Chemistry

The undergraduate minor in Chemistry consists of six courses:
CHEM 21 or 25H
CHEM 41 or 45H
CHEM 61 or 65H
CHEM 62 or 66H
CHEM 41L or 45L
CHEM 62L or 66L

NOTE: CHEM 21 has a CHEM 11 prerequisite; CHEM 11 has a corequisite of CHEM 11L; CHEM 21 has a corequisite of CHEM 21L; and CHEM 25H has a corequisite of chem 25L or 21L.

[1] At least 18 hours of credit in Chemistry courses above Chemistry 11 and 11L with individual grades of C or higher are required. (Grades of C- do not satisfy this requirement.) Courses in Chemistry and other courses specifically required (and designated by number) may not be taken pass/fail.

[2] Physics 26 and 27 are encouraged for those students considering careers as professional chemists or those students that want the option to switch from the B.A. program to the B.S. program.

[3] Chemistry 171L is strongly recommended for students planning professional work in chemical laboratories.

[4] This program meets the requirements of the American Chemical Society for the training of professional chemists.

[5] A single foreign language, through level 4 (for example, German 4) if the language was studied in high school, or through level 3 if the language was not studied in high school. Courses above the minimum General Education requirement may be taken pass/fail.

[6] One course must be taken from each of the following Perspectives: Aesthetic, Philosophical, Social Sciences, and Western Historical. (May not be taken pass/fail.)

[7] Chemistry 99 and Chemistry 101 may be taken for credit as many times as desired but may be counted for no more than 9 hours of total credit toward fulfillment of graduation requirements. Additionally, Chemistry 99 may not be counted more than once as an Advanced Chemistry Elective in the B.S. Chemistry Degree. Chemistry 99, 141, 141L, 150, 181L, and 182L are recommended in fulfilling Free Electives in the B.S. Chemistry, Biochemistry Track.

[8] One course must be taken from the following: Chemistry 131, 132, 133, 135,138; Biochemistry 104, 105, 144.

[9] Laboratory fees are not refundable after the first two weeks of class.

[10] It must be remembered that Chemistry 61 or 65H and 41 or 45H are pre- or corequisites to Chemistry 41L or 45L. Also, Chemistry 61 or 65H is a prerequisite to Chemistry 62L or 66L and Chemistry 62 or 66H is a pre- or corequisite to Chemistry 62L or 66L. However, Chemistry 41L or 45L and 62L or 66L can be taken in either order as long as all pre- and corequisites are satisfied.

Course Descriptions

10 Introduction to Chemical Concepts (2). A course emphasizing simple mathematical techniques. The course is intended for students demonstrating an inadequate background for Chemistry. Entry is by recommendation of the Department and by agreement of the student following demonstrated inadequacies in Chemistry 11. The course starts about the twelfth lecture of Chemistry 11. Fall. Chemistry faculty.

11 General Descriptive Chemistry I (3). Corequisite, Chemistry 11L. The course is the first member of a two-semester sequence. See also Chemistry 21. Atomic and molecular structure, stoichiometry and conservation of mass, thermochemical changes and conservation of energy. Fall and spring. Chemistry faculty.

11L Quantitative Chemistry Laboratory I (1). Corequisite, Chemistry 11. One four-hour laboratory a week, Fall and spring. Chemistry faculty and staff. (Fee required[9])

15 Chemistry for the Consumer (3). A course designed for nonscience majors. The course is especially recommended for students who intend to major in subjects for which a knowledge of the relationship between chemistry and society is beneficial. Concepts of general and organic chemistry (atomic structure, the periodic table, bonding, acids and bases, hydrocarbons, functional groups, carbohydrates, polymers) constitute the first half of the course followed by a presentation of the applications of those concepts (radioactivity, fertilizers, insect control, brewing, baking, food preservation, fats and oils, soaps, vaccines, drugs, pollution). Since the emphasis will be on chemical principles rather than on the applications, students who have taken Chemistry 11 or 21 will not be permitted to take this course for credit. Spring. Chemistry faculty.

21 General Descriptive Chemistry II (3). Prerequisite, Chemistry 11; corequisite, Chemistry 21L. The course is the second member of a two-semester sequence. See also Chemistry 11. Chemical equilibrium, reaction rates, representative chemical structures and reactions. Fall and spring. Chemistry faculty.

21L Quantitative Chemistry Laboratory II (1). Prerequisite, Chemistry 11L; corequisite, Chemistry 21. Techniques for quantitative acid- base, redox, and complexometric titrimetry. Gravimetric analysis. Total salt ion exchange analysis. (Transfer students who have not had quantitative analysis in their previous courses will take this laboratory.) One four- hour laboratory a week, Fall and spring. Chemistry faculty and staff. (Fee required[9])

25H Advanced General Descriptive Chemistry (3). Prerequisite, placement credit for Chemistry 11, 11L or permission of instructor; prerequisite or corequisite, Mathematics 31. One semester course for students with strong backgrounds in high school chemistry and mathematics who desire a more in-depth treatment of the subject matter. By-examination credit for Chemistry 11, 11L is awarded upon satisfactory completion of Chemistry 25. Fall. Chemistry faculty.

25L Advanced Quantitative Chemistry Laboratory (1). Corequisite or prerequisite, Chemistry 25. Synthesis and physical studies that surpass that encountered in Chemistry 11L and 21L in terms of concepts considered rather than laboratory skills. Computer molecular modeling with a major focus on organic and biologically important molecules. One four-hour laboratory a week, spring. Chemistry faculty and staff. (Fee required[9])

41 Modern Analytical Methods for Separation and Characterization (2). Prerequisite, Chemistry 21 or 25H[10] Analytical separations, chromatographic methods, spectrophotometry, acid-base equilibria and titrations, fundamentals of electrochemistry. Fall and spring. Analytical chemistry faculty: Buck, Bursey, Glish, Jorgenson, Linton, Murray, Wightman.

41L Laboratory in Separations and Analytical Characterization of Organic and Biological Compounds (1). Prerequisites or corequisites, Chemistry 41 or 45H, 61 or 65H. Applications of separation and spectrophotometric techniques to organic compounds, including some of biological interest. (This course serves as an organic chemistry laboratory for premedical and predental students.) One three-hour laboratory a week. Fall, spring and summer. Chemistry faculty and staff. (Fee required[9])

45H Honors Modern Analytical Methods for Separation and Characterization (2). Prerequisite, Chemistry 21 or 25H or permission of instructor. Analytical separations, chromatographic methods, spectrophotometry, acid-base equilibria and titrations, fundamentals of electrochemistry. Fall. Analytical Chemistry faculty. Honors equivalent of Chemistry 41.

45L Honors Laboratory in Separations and Analytical Characterization of Organic and Biological Compounds (1). Prerequisites or corequisites, Chemistry 45H, 65H or permission of instructor. Applications of separation and spectrophotometric techniques to organic compounds, including some of biological interest. (This course serves as an organic chemistry laboratory for premedical and predental students. Honors equivalent of Chemistry 41L.) One three-hour laboratory a week. (Fee required[9])

51 Introduction to Inorganic Chemistry (2). Prerequisite, Chemistry 21 or 25H. Chemical periodicity, introductory molecular orbital theory, descriptive nonmetal chemistry, structures and reactions of transition metal complexes with applications to organometallics and bioinorganic chemistry. Spring. Inorganic chemistry faculty: Hatfield, Jicha, Meyer, Schauer, Templeton.

61 Introduction to Organic Chemistry I (3). Prerequisite, Chemistry 21 or 25H. Molecular structure and its determination by modern physical methods, correlation between structure and reactivity and the theoretical basis for these relationships; classification of "reaction types" exhibited by organic molecules using as examples molecules of biological importance. Fall and spring. (41L or 45L serves as an organic chemistry laboratory for premedical and predental students.) Organic chemistry faculty: Brookhart, Coke, Crimmins, DeSimone, Eliel, Erickson, Evans, Forbes, Hiskey, Kropp, Little, Sorrell.

62 Introduction to Organic Chemistry II (3). Prerequisite, Chemistry 61 or 65H, Continuation of Chemistry 61, with particular emphasis on the chemical properties of organic molecules of biological importance. Spring. (62L or 66L serves as an organic chemistry laboratory for premedical and predental students.) Organic chemistry faculty.

62L Laboratory in Organic Chemistry (1) Prerequisite or corequisite, Chemistry 62 or k66H, Continuation of Chemistry 41L or 45L, with particular emphasis on applications of modern analytical spectroscopic techniques and separation and identification of organic unknowns. (This course serves as an organic chemistry laboratory for premedical and predental students.) One three-hour laboratory a week, spring. Chemistry faculty and staff. (Fee required[9])

65H Honors Organic Chemistry I (3). Prerequisite, Chemistry 21 or 25H or permission of instructor. Molecular structure and its determination by modern physical methods, correlation between structure and reactivity and the theoretical basis for these relationships; classification of "reaction types" exhibited by organic molecules using as examples molecules of biological importance. (45L serves as an organic chemistry laboratory for premedical and predental students. Honors equivalent of Chemistry 61.) Fall. Organic chemistry faculty.

66H Honors Organic Chemistry II (3). Prerequisite, Chemistry 65H or permission of instructor. Continuation of Chemistry 65H, with particular emphasis on the chemical properties of organic molecules of biological importance. Honors equivalent of Chemistry 62. (66L serves as an organic chemistry laboratory for premedical and predental students.) Spring. Organic chemistry faculty. (Fee required[9])

66L Honors Laboratory in Organic Chemistry (1). Prerequisite or corequisite, Chemistry 66H or permission of instructor. Continuation of Chemistry 45L, with particular emphasis on applications of modern analytical spectroscopic techniques and separation and identification of organic unknowns. Honors equivalent of Chemistry 62L. (This course serves as an organic chemistry laboratory for premedical and predental students.) One three-hour laboratory a week. (Fee required[9])

99 Research in Chemistry for Undergraduates (3). Prerequisites, one Chemistry course numbered 120 or higher and permission of the instructor and Director of Undergraduate Studies. For advanced majors in chemistry and the applied science curriculum who wish to conduct a research project in collaboration with a faculty supervisor. Restricted to on-campus work. May be taken repeatedly for credit but Chemistry 99 and 101 together may not be counted for more than 9 hours total credit toward B.A. and B.S. degrees in Chemistry, nor more than 6 hours total credit towards biochemistry track of the B.S. degree and Chemistry 99 may be counted for no more than 3 hours credit toward the advanced Chemistry elective category of the B.S. degree. Work done in Chemistry 99 may be counted towards Honors in Chemistry by petition to the Honors Committee of the Department. Further details on Chemistry 99 and Honors in Chemistry are available from the Office of Undergraduate Studies, Room 203 Venable Hall. To be arranged. Chemistry faculty. (Computer fee.)

101 Special Problems in Chemistry (1-3). Prerequisite, to be determined by consultation with Director of Undergraduate Studies. Equivalent of one to three hours a week, Fall and spring. Chemistry faculty.

120 Polymer Chemistry (3). Prerequisite, Chemistry 62; prerequisite or corequisite, Chemistry 180 or 182. Introduction to polymer chemistry; synthesis and reactions of polymers; thermodynamics and kinetics of polymerization; physical characterization of polymers; industrial uses of polymers. Spring. Organic and physical chemistry faculty.

121 Synthesis of Polymers *(Applied Sciences 121)* (3). Prerequisites, Chemistry 51, 62, or 66H. Synthesis and reactions of polymers. Fall. Organic and inorganic chemistry faculty.

122 Physical Chemistry of Polymers *(Applied Sciences 122)* (3). Prerequisite, Chemistry 181; prerequisite or corequisite, Chemistry 182. Kinetics of polymerization, molecular weight distribution and molecular weight measurements, solution properties, solid state properties of macromolecules. Spring. Physical chemistry faculty.

123 Intermediate Polymer Chemistry *(Applied Sciences 123)* (3). Prerequisite, Chemistry 122. Rheology and mechanical properties of polymers; plastics, fiber, and elastomer technology. Spring. Chemistry faculty.

124L Polymer Chemistry Laboratory (2). Prerequisites, Chemistry 62 or 66H, 62L or 66L, 121. Thermal analysis; solution viscosity; gel permeation chromatography; end group analysis; synthesis; characterization of an unknown polymer. One four-hour laboratory and one one-hour lecture each week. Spring. Chemistry faculty. (Fee required[9])

130 Introduction to Biological Chemistry *(Biology 130)* (3). Prerequisites, Chemistry 62 or 66H, 62L or 66L; Biology 11. The study of cellular processes including catalysts, metabolism, bioenergetics, and biochemical genetics. The structure and function of biological macromolecules involved in these processes will be emphasized. Fall and spring. Biological chemistry faculty: Erickson, Errede, Hiskey, Pielak, Spremulli, Thompson.

131 Nucleic Acid Chemistry *(Biochemistry 131)* (3). Prerequisites, Chemistry 130; Biology 53. Study of reactions and chemical properties basic to nucleic acids; chemical synthesis as well as biosynthesis; nucleic acids in protein biosynthesis. Spring. Biological chemistry faculty.

132 Protein Chemistry (3). Prerequisite, Chemistry 130. Structural properties of proteins; active site chemistry; chemical modification of proteins; metalloproteins; coenzyme-enzyme interactions; organization of enzyme systems. Fall. Biological chemistry faculty.

133 Enzyme Mechanisms and Kinetics (3). Prerequisite, Chemistry 132. A detailed discussion of enzyme catalysis; principles of catalysis; enzyme kinetics; the active site of enzymes; allosteric interactions between subunits; the mechanism of coenzyme catalyzed reactions. Spring. Biological chemistry faculty.

135 Physical Chemistry of Biological Macromolecules (3). Prerequisites, Chemistry 130, 181, 182. Structure of proteins, nucleic acids, and lipids. Structural transitions and intermolecular interactions. Properties of macromolecular assemblies. Techniques for the study of structure and function - optical spectroscopy, magnetic resonance, hydrodynamics, scattering, diffraction. Fall. Physical chemistry faculty.

136L Laboratory Techniques for Biochemistry (3). Prerequisites, Chemistry 130, 170L; prerequisite or corequisite, Chemistry 180, 181, or 182. An introduction to important chemical techniques and research procedures of use in the fields of protein and nucleic acid chemistry. Two four-hour laboratories and one one-hour lecture a week. Fall. Biological chemistry faculty. (Fee required[9])

137 Membrane Chemistry *(Biochemistry 137)* (3). Prerequisites, Biology 11, Chemistry 130; corequisite or prerequisite, Chemistry 180 or 181. The structure and properties of synthetic membranes and of naturally occurring biological membranes. Spring. Biochemistry and Chemistry faculties.

138 Chemistry of Metabolic Regulation (3). Prerequisites, Chemistry 130, 180. Energy metabolism and its regulation, nitrogen metabolism, biosynthesis of amino acids, fatty acid metabolism. Fall. Biological chemistry faculty.

140 Modern Methods of Instrumental Analysis for the Health and Environmental Sciences (3). Prerequisites, Chemistry 41 or 45H, 62 or 66H, 62L or 66L; prerequisite or corequisite, Chemistry 180 or 181. Survey of modern instrumental analysis, with emphasis on biomedical and environmental applications. Electroanalytical chemistry; spectroscopy, including IR, Raman, luminescence, atomic, NMR, X-ray, and mass spectroscopies, separations, including HPLC, GC, and electrophoresis; enzyme kinetic analysis; radiochemistry; automated analyzers. Does not carry credit toward the B.S. degree in Chemistry. Analytical chemistry faculty.

141 Intermediate Analytical Chemistry (2). Prerequisites, Chemistry 41 or 45H, 62 or 66H, and either180 or 181. Spectroscopy, electroanalytical chemistry, chromatography, thermal methods of analysis, signal processing. Spring. Analytical chemistry faculty.

141L Intermediate Analytical Chemistry Laboratory (2). Prerequisite, Chemistry 41 or 45H; prerequisite or corequisite, Chemistry 181; corequisite, Chemistry 141. Experiments in spectroscopy, electroanalytical chemistry, chromatography, thermal methods of analysis, and signal processing. One four-hour laboratory a week and one one-hour lecture, spring. Analytical chemistry faculty and staff. (Fee required[9])

142 Analytical Research Techniques (2). Prerequisite, Chemistry 180 or 182. Introduction to chemical instrumentation including digital and analog electronics, computers, interfacing, and chemometric techniques. Two one-hour lectures a week. Fall or spring. Analytical Chemistry Faculty.

142L Laboratory in Analytical Research Techniques (2). Prerequisite, Chemistry 180 or 182; corequisite, Chemistry 142. Experiments in digital and analog instrumentation, computers, interfacing and chemometrics, with applications to chemical instrumentation. One four-hour laboratory a week. Fall or spring. Analytical chemistry faculty. (Fee required.[9])

144 Separations (2). Prerequisite, Chemistry 180 or 181. Theory and applications of equilibrium and nonequilibrium separation techniques. Extraction, countercurrent distribution, gas chromatography, column and plane chromatographic techniques, electrophoresis, ultra-centrifugation, and other separation methods. Fall or spring. Analytical chemistry faculty.

145 Electroanalytical Chemistry (3). Prerequisite, Chemistry 180 or 181. Basic principles of electrochemical reactions, electroanalytical voltammetry as applied to analysis and the chemistry of heterogeneous electron transfers, analog electronics and electrochemical instrumentation. Fall or spring. Analytical chemistry faculty.

146 Analytical Spectroscopy I (3). Prerequisite, Chemistry 180 or 182. Fundamentals of interactions of electromagnetic radiation with matter, vibrational, electronic, nuclear magnetic, mass spectrometries, scattering-based spectroscopy, instrumentation and signal processing. Fall or spring. Analytical chemistry faculty.

147 Analytical Spectroscopy II (2). Prerequisite, Chemistry 180 or 182. Principles and applications of X-ray absorption and emission, photoelectron, Raman, gamma-ray, Mossbauer and internal reflection spectroscopy, nuclear quadrupole and electron spin resonance, fluorescence, optical rotatory dispersion and circular dichroism, secondary emission methods. Fall or spring. Analytical chemistry faculty.

148 Mass Spectrometry (2). Prerequisite, Chemistry 180 or 181. Fundamental theory of gaseous ion chemistry, instrumentation, combination with separation techniques, spectral interpretation for organic compounds, applications to biological and environmental chemistry. Fall or spring. Chemistry faculty.

150 Intermediate Inorganic Chemistry (3). Prerequisite, Chemistry 51. Electronic states of transition, metal ions, symmetry labels, ligand field theory and angular overlap model for coordination complexes, kinetics and mechanisms of transition metal reactions, organometallic chemistry, biomimetic chemistry. Fall. Inorganic chemistry faculty.

151 Theoretical Inorganic Chemistry *(Var.)*. Prerequisites. Chemistry 51, 62 or 66H. Chemical applications of symmetry and group theory, crystal field theory, molecular orbital theory. The first third of the course, corresponding to one credit hour, covers point symmetry, group theoretical foundations, and character tables. Fall. Inorganic chemistry faculty.

152 Electronic Structure of Transition Metal Complexes (3). Prerequisite, Chemistry 151. A detailed discussion of ligand field theory and the techniques that rely on the theoretical development of ligand field theory, including electronic spectroscopy, electron paramagnetic resonance spectroscopy, and magnetism. Spring. Inorganic chemistry faculty.

153 Physical Methods in Inorganic Chemistry (3). Introduction to the physical techniques used for the characterization and study of inorganic compounds. (Topics typically include vibrational spectroscopy, nuclear diffraction, Møssbauer spectroscopy. X-ray photoelectron spectroscopy, and inorganic electrochemistry) Spring. Inorganic chemistry faculty.

166 Advanced Organic Chemistry I (3). Prerequisite, Chemistry 62 or 66H; Prerequisites or corequisites. Chemistry 150, 181. A survey of fundamental organic reactions including substitutions, additions, eliminations, and rearrangements; static and dynamic stereochemistry; conformational analysis; molecular orbital concepts and orbital symmetry. Fall. Organic chemistry faculty.

167 Advanced Organic Chemistry II (2). Prerequisite, Chemistry 166. Spectroscopic methods of analysis with emphasis on elucidation of the structure of organic molecules: ^{1}H and ^{13}C NMR, infrared, ultraviolet, ORD-CD, mass and photoelectron spectroscopy. Chemistry 146 and 167 may not both be taken for academic credit. Spring. Organic chemistry faculty.

168 Synthetic Aspects of Organic Chemistry (3). Prerequisite, Chemistry 166 or 175. Modern synthetic methods and their application to the synthesis of complicated molecules. Spring. Organic chemistry faculty.

170L Synthetic Chemistry Laboratory I (2). Prerequisites, Chemistry 41L or 45L, 51, 62 or 66H, 62L or 66L. An integrated treatment of both organic and inorganic synthesis. One four-hour laboratory and one one-hour lecture a week. Fall. Chemistry faculty and staff. (Fee required[9])

171L Synthetic Chemistry Laboratory II (2). Prerequisite, Chemistry 170L. An integrated treatment of both organic and inorganic synthesis. One four-hour laboratory and one one-hour lecture a week. Spring. Chemistry faculty and staff. (Fee required[9])

175 Mechanisms of Organic and Inorganic Reactions (4). Prerequisite, Chemistry 150. Kinetics and thermodynamics; free energy relationships; isotope effects; acidity and basicity; kinetics and mechanisms of substitution reactions; one- and two-electron transfer processes; principles and applications of photochemistry; organometallic reaction mechanisms. Fall. Inorganic and organic chemistry faculty.

180 Introduction to Biophysical Chemistry (3). Prerequisites, Chemistry 61, 65H; Physics, 25; Math 32. Does not carry credit toward graduate work in Chemistry or credit toward any track of the B.S. degree in Chemistry. Application of thermodynamics to biochemical processes; enzyme kinetics; properties of biopolymers in solution. Fall. Physical chemistry faculty: Baer, Berkowitz, Dearman, Jarnagin, Johnson, Miller, Parr, Pedersen, Thompson.

181 Physical Chemistry I (3). Prerequisites, Chemistry 21 or 25H; Math 83; Physics 27, 58, or 61. Thermodynamics, kinetic theory, chemical kinetics. Fall. Physical chemistry faculty.

181L Physical Chemistry Laboratory I (2). Prerequisite or corequisite, Chemistry 181. Experiments in physical chemistry. One four-hour laboratory a week, Fall. Physical chemistry faculty and staff. (Fee required[9])

182 Physical Chemistry II (3). Prerequisite, Chemistry 181. Introduction to quantum mechanics, atomic and molecular structure, spectroscopy, statistical mechanics. Spring. Physical chemistry faculty.

182L Physical Chemistry Laboratory II (2). Prerquisite or corequisite, Chemistry 182. Experiments in physical chemistry. One four-hour laboratory a week, spring. Physical chemistry faculty and staff. (Fee required[9])

184 Thermodynamics and Introduction to Statistical Thermodynamics (1 - 3). Prerequisite, Chemistry 182. Thermodynamics, followed by an introduction to the classical and quantum statistical mechanics and their application to simple systems. The section on thermodynamics can be taken separately for one hour credit. Fall. Physical chemistry faculty.

185 Chemical Dynamics (3). Prerequisites, Chemistry 181, 182. Experimental and theoretical aspects of atomic and molecular reaction dynamics. Fall or spring. Physical chemistry faculty.

186 Introduction to Quantum Chemistry (3). Prerequisites, Chemistry 181, 182. Introduction to the principles of quantum mechanics. Approximation methods; angular momentum; simple atoms and molecules. Fall. Physical chemistry faculty.

187 Introduction to Molecular Spectroscopy (3). Prerequisite, Chemistry 186. Interaction of radiation with matter; selection rules; rotational, vibrational, and electronic spectra of molecules; laser based spectroscopy and nonlinear optical effects. Fall or spring. Physical chemistry faculty.

188 Quantum Chemistry (3). Prerequisite, Chemistry 186. Applications of quantum mechanics to chemistry. Molecular structure; time-dependent perturbation theory; interaction of radiation with matter. Spring. Physical chemistry faculty. (Computer fee.)

189 Statistical Mechanics (3). Prerequisite, Chemistry 184. Applications of statistical mechanics to chemistry. Ensemble formalism; condensed phases; nonequilibrium processes. Spring. Physical chemistry faculty.

190 Fundamentals of Materials Science *(Applied Sciences 141)* (3). Prerequisite, Chemistry 182; or prerequisite, Physics 28 and prerequisite or corequisite, Physics 105. Crystal geometry; diffusion in solids; mechanical properties of solids; electrical conduction in solids, thermal properties of materials; phase equilibria. Fall. Irene.

191 Mathematical Techniques for Chemists (3). Prerequisites, knowledge of differential and integral calculus. Chemical applications of higher mathematics. Fall. Chemistry faculty.

192 Chemistry and Physics of Electronic Materials Processing *(Physics 144, Applied Sciences 143)* (3). Prerequisite, Chemistry 182, or Physics 25 or 27, and permission of the instructor. A survey of materials' processing and characterization used in fabricating microelectronics devices. Crystal growth, thin film deposition and etching and microlithography, characterization techniques, electric and dielectric properties of materials. Spring. Chemistry and Physics faculty.

193 Chemistry and Physics of Surfaces *(Applied Sciences 143)* (3). Prerequisite, Chemistry 190. The structural and energetic nature of surface states and sites; experimental surface measurements; reactions on surfaces including bonding to surfaces and adsorption; interfaces. Spring. Irene, Jarnagin.

[9] Laboratory fees are not refundable after the first two weeks of class.

Department of City and Regional Planning

Michael A. Stegman, *Chair*

City and Regional Planning is an interdisciplinary field whose purpose is to improve the quality of life for people in urban and suburban areas and in larger regions of the country. To this end, city and regional planners apply humanistic, social science and specialized technical theory and knowledge to the layout and development of human settlements both here and abroad. Planners, for example, are involved in designing transportation systems, controlling the type and location of new development, encouraging economic development, protecting the environment and revitalizing urban neighborhoods. They are involved in designing solutions to pressing societal problems such as unemployment, homelessness, air and water pollution and urban decay.

The Department of City and Regional Planning offers two degree programs at the graduate level, and contribute courses for the undergraduate major in public policy analysis. A two-year program preparing for professional practice in city and regional planning leads to the degree of Master of Regional Planning. A program leading to the degree of Doctor of Philosophy prepares for careers in teaching and research. These two programs, opportunities in the field of city and regional planning, and application procedures are described in detail in a separate bulletin of the Department of City and Regional Planning which may be obtained by addressing a request to the Department.

Although the Department of City and Regional Planning does not offer an undergraduate degree in planning, students normally take courses in the department for one of two reasons: to enrich or expand their current field of interest or to explore the possibility of a career in planning. Planning courses allow students to see how the humanities and the social sciences can be practically applied to improving our quality of life in cities, towns and rural areas. In this way they help students deepen their appreciation of their major field of study. Some planning courses fulfill undergraduate degree requirements such as philosophical or social sciences perspectives.

Students also take planning courses to explore city planning as a career. City and regional planners work for a wide variety of public and private organizations. In the public sector they are employed by local, state, and federal governments. In the private sector they work for development companies, consulting firms and a variety of non-profit organizations. Although some opportunities exist for those with undergraduate degrees, a masters degree is normally required for advancement in the field. Many students want to prepare for graduate study by taking planning courses as part of their undergraduate program.

For undergraduate students interested in the study of public policy, the curriculum in Public Policy Analysis provides a unique educational opportunity. Students who declare Public Policy as a major are required to complete a six-course core which provides a rigorous intellectual framework and skills for analyzing public policy options. Students also are required to take additional courses in an area of specialization. Internships between the junior and senior years are strongly recommended, and students are assisted in locating internships.

The requirements for Public Policy Analysis are described elsewhere in this Bulletin.

The department's graduate program offers opportunities for specializing in economic and community development, land use and environmental planning, real estate development and housing, urban services and infrastructure management, and planning in developing areas. Each student is asked to select an area of specialization and to plan a program of course work with a faculty adviser.

Two combined programs are offered in collaboration with related professional degree programs. These are: a combined program in Planning and Law in collaboration with the School of Law at Chapel Hill; a combined program in Planning and Business Administration in collaboration with the UNC's Kenan-Flagler School of Business; and a combined program in planning and public administration in collaboration with the Department of Political Science.

Important resources available to the department include the Center for Urban and Regional Studies, a research and service activity in urban and regional affairs.

Regularly Scheduled Courses for Undergraduates

46 Introduction to Urbanism and Planning (3). Discussion and analysis of current urban problems and of forces responsible for urban and regional growth. Historical perspective on the planning profession and the planning approach to urban phenomena. Evaluation of current proposals dealing with aspects of the urban situation of the U.S. Fall. Howes.

67 Ethical Bases of Public Policy Decision-Making (3). Critical exploration of ethical and theoretical bases for making public policy decisions. Analysis of normative arguments of contemporary public policy issues. Fall and spring. Brower.

73 Planning, Politics and Urban Policy. A review and exploration of the planning and policy development function of local government. Urban politics and political systems are also to be covered. Fall or spring. Howes.

94A Futures Analyses and Forecasting (3). An examination of the concepts and methods used in forecasting. Extrapolative techniques and future analysis methods. The application of forecasting techniques in various institutional settings. Spring, Faculty.

94 Practicum in Policy Analysis *(Public Policy Analysis 94, Political Science 94)* (3). See Public Policy Analysis 94D for description.

Regularly Scheduled Courses for Graduates and Advanced Undergraduates

110, 111 Selected Topics in Urban Studies (3). An introduction to the functioning of the urban area as a complex system, and to the analysis of policies aimed at development and change. Fall or spring. Faculty.

124 Urbanization and Planning in the Third World (3). Surveys theories, issues, and planning strategies employed in developing countries. Topics include: rapid population growth and urbanization, squatter settlements, regional inequalities, problems of the urban and rural poor, women in the development process, financing urban development, rural development strategies, regional development planning, human settlement approaches, and national urbanization policies. Fall. Lacey.

125 Urban Services and Infrastructure (3). An examination of the public services provided by local governments and the facilities required to provide them. The course concentrates on transportation, water management, waste treatment, and air quality. Each urban service is examined with respect to its institutional framework, alternative service delivery mechanisms, public policy, and history. The course provides a rigorous analysis of the financing, pricing, and public regulation of these services, and covers methods for measuring their impacts, efficiency, and effectiveness. Spring,.Luger.

126 Urban Transportation Planning (3). Fundamental characteristics of the urban transportation system as a component of urban structure. Methodologies for the analysis and planning of urban transportation. Techniques for the analysis of problems and the evaluation of plans. Fall. Taylor.

127 Public Transportation (3). A seminar investigating alternative public urban transportation systems including mass transit, innovative transit services, and paratransit schemes. The systems will be examined from economic, land use, social, technical, and policy perspectives. Spring. Taylor.

129 Transportation Planning Models (3). Techniques for predicting transportation demand. The transportation planning process: data collection, trip generation, modal choice, trip distribution and assignment. System evaluation techniques: social, economic, and environmental impacts of transportation; investigation of innovative modeling techniques. Spring. Taylor

130 Quantitative Analysis for Planners and Public Managers (3). Foundation course in statistical concepts and methods primarily for professional Master's degree candidates and public policy majors. Descriptive statistics, estimation and hypothesis testing, simple correlation and regression, simple analysis of variance, and information acquisition, analysis and presentation. Microcomputer laboratory. Fall. Kaiser, Malizia.

131 Quantitative Methods in Planning (3). Fundamental quantitative methods as aids in prediction and decision making in planning, including multivariate statistics, decision analysis, and linear programming and simulation. Spring, .Kaiser.

136 Geographic Information Systems *(Geography 191)*. Thematic data sets will be used to model and test interactions between spatially oriented information for resource evaluation. Modeling techniques, cartographic output, data overlay methods, and "hands on" computer application will be featured. Fall, spring. Walsh.

199 Honors Seminar in Urban and Regional Studies (3). An overview of the subject matter and methods of investigation of the several disciplines as these relate to the study of cities and regions. Discussions supplemented by presentation of original papers prepared by students. Fall or spring. Faculty.

Department of Classics

G. Kenneth Sams, *Chair*

The Department of Classics offers four different major programs for the B.A. in Classics: Latin, Greek, Classical Archaeology, and Classical Civilization. A combined Latin and Greek major and a double major combining Greek or Latin with another subject are also available. Individual requirements are listed below; for more details of major programs, obtain a copy of the Department's "Information for Majors" through the departmental office, 212 Murphey Hall.

The Department offers a minor in Greek and a minor in Latin. The undergraduate minor in Greek consists of four courses in Greek, including Greek 4 and three courses numbered higher than 4.

The undergraduate minor in Latin consists of four courses in Latin, including Latin 21 and three courses numbered higher than 21.

Certain conditions apply to Latin and Greek minors. The minor in either Classical language may not be an option for majors in Classical Archaeology who have chosen that language (Greek or Latin) to fulfill degree requirements (four courses above level 2).

However, Classical Archaeology majors may elect a minor in the other Classical language. Similarly, majors in Classical Civilization who are required to complete level 4 in either Greek or Latin may elect a minor in the other Classical language, but not in the one used to satisfy degree requirements in the major.

Descriptions of Greek and Latin courses are located later in the Department of Classics section.

Classical Semester in Rome

The Department of Classics is a founding member of the Intercollegiate Center for Classical Studies in Rome and regularly sends students there for a semester or a year. The Center offers courses in Latin, Roman archaeology and history, Greek, Italian, and Art History. The program is open to qualified undergraduates in Art History, Ancient History, and Classical Studies. Interested students should consult Professor Koeppel.

Latin Education Major

Students who wish to be certified to teach in public high schools should consult the School of Education about the Latin education major, which combines a major in Latin with the education courses required for certification.

Eunice and Luther Nims Scholarship

As a result of the generous bequest of F. Boyden Nims, the Department of Classics is able to nominate Classics majors to the Office of Scholarships and Student Aid for Eunice and Luther Nims Scholarships. The exact amount of the award varies with need, but may include full tuition and other expenses, including the extra expense of study at the Inter-collegiate Center in Rome. Further information is available from the Director of Undergraduate Studies.

Students interested in majoring in Classical Archaeology should consult the Department as early as possible. General College prerequisites are CLAR 41 and 42, Classics 33 or 35, and either Latin 1-2 or Greek 1-2 (or their equivalents). Major requirements are three additional courses in Classical Archaeology, one of which must be at the 100-level; a second Classics course, 30- level or higher; four additional courses continuing either Latin or Greek, normally 3-4 and two beyond; and History 52 and 53.

20 Ancient Cities *(CLAR 20)* (3). An introduction to Near Eastern and Classical archaeology through study of representative cities from Neolithic times to the period of the Roman Empire. Fall and spring. Staff. (Note: May not be used to help satisfy the degree requirements for the major in Classical Archaeology.)

31 History of Western Art *(Art 31)* (4). (See Art 31 for description.) Fall. (Note: May not be used to help satisfy the degree requirements for the major in Classical Archaeology.)

33 Ancient Survey *(Art 33)* (3). (See Art 33 for description.) Spring. Sturgeon. (Note: May not be used to help satisfy the degree requirements for the major in Classical Archaeology.)

41 Greek Archaeology *(CLAR 49)* (3). The historical development of the art and architecture of Greece from the Bronze Age through the Hellenistic period. Fall. Sams.

42 Archaeology of Italy *(CLAR 50)* (3). The historical development of the Italian peninsula as seen in its physical remains, with emphasis upon Etruscan and Roman sites. Spring[1]. Koeppel.

47 Archaeology of Ancient Near East (3). A survey of the cultures of the ancient Near East, Mesopotamia, Anatolia (modern Turkey), and the Levant, from the first settled villages of the 9th millennium to the Persian conquest of Babylon in 539 B.C. Alternate years. Gates.

48 Archaeology of Egypt (3). A survey of the archaeological remains of ancient Egypt, from the earliest settlements of the Neolithic period until the 2nd century B.C. Spring. Gates.

51 History of Early Christian and Byzantine Art *(Art 51)* (3). Connor.

94A Archaeology and Man in the Mediterranean (3). For majors in Classical Archaeology and others with background in the subject. Focus upon types and techniques of archaeology and its role as an adjunct for other subjects. Alternate years. Staff.

94B Art of Classical Greece *(Art 94B)* (3). (See Art 94B for description.) Alternate years. Sturgeon.

78 Roman Art *(CLAR 78)* (3). The arts of Rome, particularly architecture, sculpture, and painting, preceded by a survey of Etruscan and Hellenic art and their influence on Rome. Alternate years, Fall. Koeppel.

97, 98 Honors Course (6). See Classics 97, 98.

140, 141 Problems in the History of Classical Ideas (3 each). Prerequisite, permission of the Department.

148 Art in the Age of Justinian and Theodora *(Art 148)* (3). Prerequisite, any course in history, art history, classics or permission of instructor. Interdisciplinary course is based on monuments, history and contemporary writings of Byzantine empire during the rule of Justinian I (527 - 565) and the empress Theodora (527 - 548). Approach will be comparative, analytical and contextual and will include a feminist perspective. Fall.

149A Constantinople: The City and its Art *(ART 149A)* (3). Prerequisite, any course in history, art history, classics or permission of instrtuctor. Interdisciplinary study of the city of Constantinople, capital of the Byzantine empire from 325 to 1453, with emphasis on the artistic, social and cultural context. Includes study of monuments and their decoration, objects, contemporary documents and sources, all within a chronological, historical framework. Fall, spring. Connor.

149B In Constantinople *(Art 149B)* (3). Prerequisite, 149A or permission of instructor. This course, taught primarily in Istanbul, once Constantinople, capital of the Byzantijne empire 325-1453, provides first-hand experience with monuments and an overview of the history, topography, and culture of a great city in the history of civilization. Summer. Connor, Gates.

186 Archaeology of Syro-Palestine (3). Prerequisite, CLAR 45 or 46 desirable. Detailed survey of the cultural and historical remains of ancient western Syria and Palestine, to be taught in alternating semesters: a) Neolithic - Early Bronze Age (8000 - 2000 B.C.); b) Middle Bronze - Iron Age (2000 - 500 B.C.). Staff.

187 Mesopotamia and the Levant in the Bronze Age (3). The archaeology of Mesopotamia and the Levant in the Bronze Age, 3500 - 1200 B.C. Alternate years. Staff

188 The Archaeology of the Near East in the Iron Age (3). Prequisite, CLAR 41 or permission. A survey of the principal sites, monuments and art of the Iron Age Near East, ca. 1200 to 500 B.C. Alternate years. Sams.

189 The Archaeology of Anatolia in the Bronze and Iron Ages (3). Prerequisite, CLAR 41 or permission. A survey of Anatolian archaeology from the third millenium through the sixth century B.C. Alternate years. Sams.

190 Greek Architecture (3). Prerequisite, CLAR 43 or permission. Alternate years, Fall. Sams.

191 Architecture of Etruria and Rome (3). Prerequisite, CLAR 44 or permission. Alternate years, spring. Koeppel.

193 Greek Painting (Art 193) (3). Sturgeon.

194 Archaic Greek Sculpture (Art 194) (3). Sturgeon.

195 Classical Greek Sculpture (Art 195) (3). Sturgeon.

196 Hellenistic Greek Sculpture (Art 196) (3). Sturgeon.

198 Aegean Civilization *(Art 198)* (3). Prerequisite, CLAR 43 or permission. The art of Minor Crete and Mycenaean Greece from about 3000 - 1200 B.C. Staff.

Classics in English

(Courses not Requiring a Reading Knowledge of the Greek or Latin Language)

The following courses in Classical literature and civilization are especially designed to supply the necessary foundations for those who, without a reading knowledge of the ancient languages, want to learn about the Ancient World, or plan to specialize in modern literature, history, art, or one of the many other fields in which an acquaintance with the civilizations of the Greeks and Romans is desirable. When properly approved, these courses will be allowed to count as part of the major requirement in other departments.

Students considering a major in Classical Civilization should consult the Department as early as possible. General College prerequisites are Classics 33 and 35, and either Latin 1-2 or Greek 1-2 (or their equivalents). Major requirements are five courses above the 30-level (one of which must be at the 100-level) in Classics or Classical Archaeology, including at least one each in Greek literature, Roman literature and Classical Archaeology; two additional courses continuing either Latin or Greek, normally 3-4; and History 52 or 53, or a higher level course in Greek or Roman History.

20 The Greeks (3). Introduction to the history, literature, religion, philosophy, science, art, and architecture of Greece from Homer to Alexander the Great. Emphasis on primary sources. Fall. Smith.

21 The Romans (3). A survey of Roman civilization from the beginning to the late empire, dealing with history, literature, archaeology, philosophy and religion, technology, the economy, and social and political institutions. Fall. Wooten.

25 Medical Word Formation and Etymology (3). Systematic study of the formation of medical terms from Greek and Latin roots, to build vocabulary and recognition. For general etymology see Classics 26. Fall. Staff.

26 Word Formation and Etymology (3). Systematic study of the formation of words from Greek or Latin to build vocabulary and recognition. For medical terminology see Classics 25. Spring. Staff.

30 Classical Motifs in World Literature (3). Study of a recurring motif, such as the hero on a journey, as it appears in important Greek and Latin works, with comparative examples from medieval and modern literature, as an introduction to the nature and spirit of the classics. Fall. Reckford.

31 The Theater in the Greek and Roman World (3). The physical setting and techniques of classical theater: tragedy, comedy, and other public spectacles in Greece and Rome. Alternate years, Fall. Smith.

33 The Age of Pericles (3). An introduction to Classical civilization through study of its most important period in Greece. Attention to history, philosophy, and art. Lecture and discussion. Spring. Stadter, West.

34 Alexander and the Age of Hellenism (3). An introduction to Classical Civilization through study of the period in which it spreads beyond mainland Greece to influence and partially merge with the cultures of the Near East, Egypt, and Rome. Attention to history, literature, philosophy, and art. Lectures and discussion. Alternate years. Brown.

35 The Age of Augustus (3). An introduction to Classical Civilization through study of the literature, history, and art of one of the most crucial periods in Roman history. Lectures and discussion. Fall. Houston, Wooten.

36 The Age of the Early Roman Empire (3). An introduction to the civilization of the Roman Empire through study of the literature, history, and archaeology of its most colorful period. Spring. Houston.

42 Sex and Gender in Antiquity (3). Exploration of gender constructs, what it meant to be a woman or a man, in antiquity, as revealed in literary, historical, and archaeological sources. Readings from Homer, Euripides, Plato, Ovid, Virgil, Juvenal, Petronius, and other ancient authors. Spring. Dessen, Wooten.

43 Athletics in the Greek and Roman World (3). Study of athletics as a unifying force in ancient society, emphasizing the Olympic games and other religious festivals. Consideration of athletic professionalism, propaganda, and social trends using literary and archaeological sources. Alternate years, Fall. West.

44 Technology and Culture in the Roman Empire (3). A survey of the state of technology in Rome during the first three centuries A.D. Consideration of the interrelationships of technology and government, art, economics, and the quality of life. Alternate years, spring. Houston.

61 Homer and the Heroic Age of Greece (3). The Iliad, the Odyssey. Hesiod, heroic and oral poetry. The archaeology of Homeric Greece, the study and influence of the Homeric poems in modern times. Alternate years, Fall. West.

62 The Tragic Dimension in Classical Literature (3). The nature of the tragic and the function of tragic drama. The development and sources of Greek tragedy. Aristotle's Poetics. Alternate years, spring. Brown, Smith.

64 The Classical Background of English Literature (3). Study of Classical writers influential on selected genres of English literature. Alternate years, spring. Reckford.

77 Myth, Story, and Belief in Greek Literature (3). An introduction to myth, heroic lore, and religion through the study of major works of Greek literature. Core readings: Homer, Hesiod, and selections from tragic drama. Fall and spring. Staff.

91 Topics in Classical Studies (3). Students may suggest to the Chair of the Department topics for individual or group study. Advance arrangements required. Both semesters.

94A The Seven Liberal Arts (3). Permission of the instructor required. Intended to provide an opportunity for seniors majoring in any department to develop a personal conception of the liberal arts with an historical and philosophical structure. Open only to seniors. Spring. Kennedy.

97, 98 Honors Course (6). For departmental majors in Classical Archaeology, Classical Civilization, Greek, and Latin. Fall and spring. Mack, Brown.

109 Greek and Roman Historical Literature *(History 109)* (3). The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others, with consideration of their literary qualities and their readability as historians. Fall. Linderski.

112 Classical, Christian, and Post-Classical Rhetoric (Comparative Literature 112, Speech 112) (3). Study of the classical tradition in rhetoric and reactions against it from the 4th century B.C. to the 18th century of the Christian era. Spring. Kennedy.

115 Roman Law (3). Introduction to Roman Law, public and private. On the basis of Roman texts in translation (or the original if desired), consideration of (a) the principles of Roman constitutional law and (b) the legal logic and social importance of Roman Civil Law. Alternate years, spring. Linderski.

118 Introduction to Byzantine Civilization (3). Intellectual and social history of the Byzantine Empire from Justinian to 1453, noting the interaction of Classical and Christian culture and Byzantium's influence on neighboring peoples and on the Renaissance. Spring. Connor.

Greek

Students interested in an undergraduate major in Greek or in a combined major in Greek and Latin should consult the Department of Classics by the second semester of the sophomore year. The basic requirements are Greek 4 and five additional Greek courses above the 4-level. For Greek as satisfying the language requirement for the B.A. degree see the "General College" section.

1 - 2 Elementary Greek Classical (4 each). Fall and spring. Staff.

1 - 2 Elementary Greek (6). Permission of the instructor required. Combined. Spring. Staff.

3-4 Intermediate Greek I and II (3 each). Prerequisite, Greek 1-2 or equivalent. Review of fundamentals; reading in selected classical texts, such as Xenophon, Plato, Europides, or others. Fall, spring. Staff.

21 Advanced Greek I (3). Substantial readings from Homer's Iliad or Odyssey, the remainder of the selected poems to be read in translation. Fall. Staff.

22 Advanced Greek II (3). Readings from one or more Greek Tragedies. Spring. Staff.

51 Classical Greek Prose (3). Prerequisite, Greek 21. Readings in Herodotus, Thucydides, Plato, or other authors. With permission of the department, this course may be repeated for credit. Fall. Staff.

52 Greek Poetry (3). Prerequisite, Greek 22. Readings in Sappho, Aeschylus, and other authors. With permission of the department, this course may be repeated for credit. Fall. Staff.

88 Greek New Testament (3). Prerequisite, Greek 3 or equivalent. Offered on sufficient demand. Spring. Staff.

91 Special Readings in Greek Literature (3). Prerequisite, Greek 22. Yearly as needed. Staff.

97 - 98 Honors Course (6). See Classics 97, 98.

106 Greek Dialects (3). Prerequisite, graduate status or consent of the instructor. Characteristics and historical development of the Greek dialects, including Mycenean, with reading of selected texts. Alternate years. Staff.

107 Greek Composition (3). Prerequisite, Greek 21. Alternate years. Staff.

108 Readings in Early Greek Poetry (3). Prerequisite, Greek 21 or 22. Alternate years. Brown.

109 Readings in Greek Literature of the Fifth Century (3). Prerequisite, Greek 21 or 22. Alternate years. Reckford, Stadter.

110 Readings in Greek Literature of the Fourth Century (3). Prerequisite, Greek 21 or 22. Alternate years. Kennedy, West, Wooten.

121, 122 Introductory Modern Greek (3 each). Offered irregularly. Staff.

140, 141 Problems in the History of Classical Ideas (3). Prerequisite, permission of the Department.

158 Greek New Testament *(Religion 119)* (3). Prerequisite, Greek 21 or equivalent. On application by five or more students. Stadter.

Latin

Students interested in an undergraduate major in Latin or a combined major in Latin and Greek should consult the Department by the second semester of the sophomore year. The requirements are Latin 21 and seven additional courses 20-level or higher. For Latin as satisfying the language requirement for the B.A. degree see "General College." Students interested in teaching Latin in public schools should consult the School of Education. Latin courses required are Latin 3, 4, 21 and any 6 courses 20-level or higher.

1 - 2 Elementary Latin (4 each). Fall and spring. Wooten; staff.

3-4 Intermediate Latin (3 each). Review of fundamentals. Reading in selected texts such as Catullus, Ovid, Cicero, or others. Fall and spring. Staff.

5. Medieval Latin (3). Prerequisite, Latin 3 or equivalent. Fall. Staff.

21 Virgil (3). Prerequisite, Latin 4 or placement. Systematic review of Latin grammar. Reading in Virgil's Aeneid, normally two books in Latin and the remainder in translation. Freshman and sophomore elective. Fall. Houston, Mack.

22 Cicero: The Man and His Times (3). Prerequisite, Latin 4 or placement. Careful reading of selected works. of Cicero, exercises in Latin composition. Spring. West, Linderski.

31 Roman Historians (3). Prerequisite, Latin 21. Readings in Caesar, Sallust, and/or Livy. Fall, spring. Staff.

32 Roman Comedy (3). Prerequisite, Latin 21. Readings in Plautus and Terence, or both. Staff.

33 Lyric Poetry (3). Prerequisite, Latin 21. Reading in Catullus and Horace. Staff.

34 Augustan Poetry (3). Prerequisite, Latin 21. Reading in Ovid, Tibullus, Propertius, or other poets. Staff.

51 Lucretius (3). Prerequisite, Latin 21. Reading in Lucretius and related works. Staff.

52 Petronius and the Age of Nero (3). Prerequisite, Latin 21. Staff.

53 Satire *(Horace & Juvenal)* (3). Prerequisite, Latin 21. Staff.

54 Tacitus and Pliny's Letters (3). Prerequisite, Latin 21. Staff.

91 Special Readings in Latin Literature (3). Prerequisite, Latin 21 or permission of instructort. Offered on demand. Staff.

97, 98 Honors Course (6). See Classics 97, 98.

110 Introductory Latin Composition (3). Prerequisite, Latin 22 or the equivalent. Review of Latin grammar and idiom, exercises in composition, introduction to stylistics. Fall. Staff.

111 Readings in Latin Literature of the Republic (3). Prerequisite, Latin 21 or 22. Alternate years. Linderski.

112 Readings in Latin Literature of the Augustan Age (3). Prerequisite, Latin 21 or 22. Alternate years. Mack, Reckford.

113 Readings in Latin Literature of the Empire (3). Prerequisite, Latin 21 or 22. Alternate years. Houston.

114 Readings in Latin Literature of Later Antiquity (3). Prerequisite, Latin 21 or 22 or the equivalent. Alternate years. Ganz, Kennedy.

130 Medieval Latin Literature to the End of the Carolingian Age (3). Prerequisite, Latin 14 or 102, or the equivalent. Readings of the selections from representative writers in prose and poetry. Fall. Ganz.

131 Renaissance Humanism and the Latin Tradition *(Comparative Literature 171)* (3). Prerequisite, Latin 21 or equivalent. Topics in the evolution of Humanism from the twelfth century School of Chartres through Petrarch to Erasmus, including the transmission and assimilation of ancient texts; readings in Latin from a variety of writers. Alternate years.

140, 141 Problems in History of Classical Ideas (3). Prerequisite, permission of the Department.

NOTE: One course from the group numbered 31 - 34 and one from the group numbered 51 - 54 will be offered each semester in numerical order.

Curriculum of Comparative Literature

George A. Kennedy, *Chair*

The Curriculum of Comparative Literature explores the major works of Western literature, as well as interrelations among national literatures, thereby enabling students to acquire a broad, liberal education. Sophomores planning to major in Comparative Literature should take the foreign-language option and the two-semester Great Books course (CMPL 21 & 22) as part of their General College requirements.

An undergraduate major consists of eight courses: two literature courses in a foreign language (beyond the requirements of the General College foreign-language option); two courses in Classics; and four courses taught within the Curriculum of Comparative Literature, to be chosen in consultation with the undergraduate adviser.

Minor in Comparative Literature

The minor in Comparative Literature is available to any undergraduate who has completed CMPL 21 and 22 as part of the General Education requirement or completes these courses during the junior year.

In addition to:

CMPL 21 Great Books: Renaissance through Neoclassicism
CMPL 22 Great Books: Romanticism through Modernism
the minor in Comparative Literature consists of the following courses:

For students majoring in foreign literature (French, German, Italian, Latin, Russian, Spanish, etc.) the requirements for the minor are four additional courses listed or cross-listed in Comparative Literature, with one exception. Courses cross-listed between Comparative Literature and Classics may not be counted for a minor in Comparative Literature by students majoring in Classics.

For students majoring in other departments, curricula, or schools, the requirements for the minor are one literature course in a foreign language (i.e., literature read in the original language, but not conversation) beyond the General College foreign language requirement and four additional courses listed or cross-listed in Comparative Literature.

Undergraduates majoring in Comparative Literature may minor in any department, curriculum, or school in which a minor program is offered. However, the two foreign language literature courses required for the major in Comparative Literature may not also be counted as part of a minor in any of the foreign language departments.

Courses in Comparative Literature for Undergraduates

21 Great Books: Renaissance through Neoclassicism (3). Selected readings from Western literature, including authors such as Dante, Rabelais, Cervantes, Montaigne, Shakespeare, Racine, Moliere, Sterne, Lessing, Voltaire. Fall. Staff. Fulfills aesthetic perspective requirement.

22 Great Books: Romanticism through Modernism (3). Selected readings from Western literature, including authors such as Goethe, Flaubert, Dostoevsky, Tolstoy, Ibsen, Kafka, Mann, Proust, Camus, Brecht and Woolf. Spring. Staff. Fulfills aesthetic perspective requirement.

51 Introduction to Comparative Literature (3). The history and definition of Comparative Literature as a discipline, including discussion of such central concepts as periodization, genre, and literary influence, as well as an exploration of some contemporary critical theories. Richards.

81 Philosophy and Literature in the 18th and 19th Centuries (3). The influence of philosophy on literature during the 18th and 19th centuries in Western Europe, focusing on such figures as Shaftsbury, Pope, Leibniz, Voltaire, Kant, Novalis, Comte, Balzac, Taine, Zola. Fulfills philosophical perspective requirement.

85 Structuralism and the Humanities (3). An examination of structuralism as an international and interdisciplinary movement, and as a mode of interpretation of such diverse cultural artifacts as folktale, myth, poetry, narrative, film, and painting. Leonard.

90 Form and Vision in the Modern Novel (3). A study of modern trends in the structure of the novel, including works by such writers as Proust, Faulkner, Hesse, Woolf, Mann, Robbe-Grillet and Gide. Leonard. Fulfills aesthetic perspective requirement.

92 Women and Work, 1850 - 1900 (3). An explanation of the problems of work for women in the later nineteenth century, drawing on both historical and fictional materials to illuminate each other. Furst. Fulfills social science perspective requirement.

93 Adolescence in Twentieth-Century Literature (3). An analysis of the literary portrayal of adolescence by major twentieth-century English, American, and European writers, focused on dominant themes and modes of representation. Furst. Fulfills aesthetic perspective requirement.

94 Interdisciplinary Seminar in Renaissance Studies *(History 94D, Romance Languages 94A)* (3). An interdisciplinary thematic study of Renaissance (14th, 15th, and 16th centuries) letters, art, historic movements in Europe. Fall or spring. Masters/Headley. Capstone course, Western Historical Perspective.

95 Special Topics in Comparative Literature (3). Offered any semester. Staff.

96 Modern Women Writers: The Development of a Literary Tradition (3). The development of a women's literary tradition in the works of such writers as George Sand, George Eliot, Isak Dinesen, Colette, Virginia Woolf, Gertrude Stein, Marguerite Duras, Nathalie Sarraute, Marguerite Yourcenar. Leonard. Fulfills aesthetic perspective requirement.

97 Honors Course (3). Required of all students reading for honors in Comparative Literature. Fall. Staff.

98 Honors Course (3). Required of all students reading for honors in Comparative Literature. Spring. Staff.

Courses for Graduates and Advanced Undergraduates

Period Courses

140 Reading Course (Var.). Staff.

150 Major Works of Twentieth-Century Critical Theory (3). Prerequisite, two courses in CMPL or graduate status. Comparative study of representative works on literary and cultural theory or applied criticism to be announced in advance. Spring. Leonard.

170 The Middle Ages (3). Study of selected examples of Western medieval literature in translation, with particular attention to the development of varieties of sensibility in various genres and at different periods. Alternate years. E. D. Kennedy. Aesthetic perspective.

172 Literature of the Continental Renaissance in Translation (3). Discussion of the major works of Petrarch, Boccaccio, Machiavelli, Castiglione, Ariosto, Tasso, Rabelais, Ronsard, Montaigne, Cervantes, and Erasmus. Alternate years. Masters. Aesthetic perspective.

173 Baroque (3). Comparative analysis of the characteristic theme of seventeenth-century prose and poetry with sampling of representative texts from Italy, France, Spain, Germany, and England. Alternate years.

174 The Eighteenth Century (3). A study of 18th-century European literature, its regional manifestations, the development of its genres, and its relation to the Enlightenment, Neoclassicism, rationalism, and cults of sensibility. Readings of major literary and philosophical texts, and recent critical assessments.

175 Romanticism (3). An exploration of the period concept of Romanticism, using selected literary works by such writers as Blake, Wordsworth, Coleridge, Goethe, Novalis, Schlegel, Hugo, Nerval, Chateaubriand. Alternate years. Furst.

176 Realism (3). An exploration of the period concept of Realism through selected works by such writers as George Eliot, Dickens, James, Dostoevsky, Tolstoy, Balzac, Stendhal, Flaubert, Zola. Alternate years. Furst.

177 Naturalism (3). The Naturalist movement in European and American literature of the late nineteenth and early twentieth centuries, focusing on its philosophical, psychological, and literary manifestations in selected plays and novels. Spring (alternate years). Furst.

Genre Courses

178 Modernism (3). An exploration of the period concept of modernism in European Literature, with attention to central works in poetry, narrative, and drama, and including parallel developments in the visual arts. Fall or spring. Leonard.

180 Concepts and Perspectives of the Tragic (3). Ancient and modern versions of tragic themes, tracing the transformations of Greek myths in the light of emerging concepts of tragedy. Includes works by Sophocles, Corneille, Racine, Goethe, Sartre and Giraudoux. Alternate years.

184 The Drama from Ibsen to Beckett (3). The main currents of European drama from the end of the nineteenth century to the present. Includes Chekhov, Strindberg, Pirandello, Lorca, Brecht, Anouilh.

185 Approaches to the Novel (3). The narrative techniques of selected works by Dostoevsky, Gide, Kafka, Mann, Woolf, Sartre, Camus, and others. Alternate years. Leonard.

Special Topics Courses

145 History of Aesthetics (3). Ancient and modern positions in aesthetics, with attention to their philosophical foundations and their significance for the study of literature. Including Plato, Aristotle, Plotinus, Kant and Hegel. Spring. Smyth. Philosophical Perspective.

191 Autobiography as a Literary Form (3). The rise and evolution of interest in the self in literary forms from St. Augustine's to Rousseau's Confessions through Abelard, Dante, Petrarch, Cellini, and Montaigne. Alternate years. Cervigni.

Cross-listed Courses

CMPL 30 Classical Motifs in World Literature. (3). Reckford. (Classics)

CMPL 64 The Classical Background of English Literature (3). Smith. (Classics)

CMPL 89 Interdisciplinary Seminar in Renaissance Studies (3). Headley and Masters. (Romance Languages)

CMPL 111 The Rhetoric of the Sophists, Plato, and Aristotle (3). G. A. Kennedy. (Classics)

CMPL 112 Classical, Christian, and Post-Classical Rhetorics (3). G. A. Kennedy. (Classics)

CMPL 135 Consciousness and Symbols (3). Peacock. (Anthropology)

CMPL 142 Philosophy in Literature (3). Smyth. (Philosophy)

CMPL 153 Medieval Romance (3). E. D. Kennedy. (English)

179 Literature of the Americas *(English 179)* (3). Prerequisite, two years of college level Spanish or equivalent. Permission of instructor required. An examination of U.S.-Latin American political, social, and cultural interaction, drawing on a multi- disciplined analysis of representative texts from U.S. and Latin America, selected from a variety of genres. Readings and class selections in both English and Spanish. Whisnant.

Department of Computer Science

Stephen F. Weiss, *Chair*

The Department of Computer Science offers instruction and performs research in theory, techniques, and applications of computing. Although primarily a graduate department, it offers courses and academic advice to undergraduates majoring in other programs.

Undergraduate students interested in specializing in computer science should consider the Computer Science Option of either the B.S. in Mathematical Sciences or the B.S. in Applied Sciences. Details are available in the catalog sections for each curriculum and from the curriculum offices.

Students in any field interested in preparing for a graduate program in computer science should consult an undergraduate adviser in the Computer Science Department.

Students who wish to devote serious study to programming should begin by taking either COMP 14 or COMP 15, and continue with COMP 114 and COMP 121. We urge that an introductory programming course be taken in the freshman year. Students with programming experience in any language should consult a Computer Science adviser to determine whether they should start in a more advanced course instead.

Students who wish to use computers vocationally should take one of the introductory courses and one or two more advanced courses. Students planning careers in mathematics or science should consider taking COMP 114, 121, and 151. COMP 171 and 172 are appropriate for students interested in the social sciences or humanities. The Department encourages all students who wish to develop the ability to use a personal computer for common applications to take COMP 4. COMP 96 satisfies the Philosophical Perspective requirement in the General College and has no programming prerequisite.

Courses

4 **Introduction to Computers** (3). Elementary computer literacy, with personal computer laboratory; nature and history of computers, how computers work; word processing and spreadsheet program use; exposure to programming; benefits and dangers to society. Fall, spring, and summer. Walsh, Holton.

14 Introduction to Programming (3). Introduction to computer use. Approaches to problem-solving; algorithms and their design; fundamental programming skills, using Pascal. Students may not receive credit for both COMP 14 and 15. Fall, spring, and summer. J.B. Smith, Coggins, Weiss.

15 Introduction to Functional Programming (3). An introduction to programming in the functional programming style, e.g., using a dialect of LISP. A brief introduction to an imperative language such as Pascal. A first course for prospective majors or students with some programming background. Students may not receive credit for both COMP 14 and 15. Fall. Stanat.

90 Research in Computer Science (1 - 3). For advanced majors in the Mathematical Sciences and Applied Sciences curricula who wish to conduct a research project with a faculty supervisor. May be taken repeatedly for up to a total of 6 credit hours. Staff.

92 Practicum (2 - 3). Prerequisites, COMP 114, concentration in Computer Science Option of the Curriculum in Mathematical Sciences. Work experience in nonelementary computer science approved by the instructor. The grade, pass or fail only, will depend on a substantial written report by the student and a written evaluation by the employer. Staff.

96 Computers and Society (3). Cultural, social, philosophical, technical and economic effects of computers. Ethics of technology and computer use. Influence of computers, as paradigms, on world view. Computers (and robots) as autonomous (human ?) beings. Fall, spring, and summer. Halton *Fulfills philosophical perspective requirement.*

104 Applications Programming I (2), 105 Applications Programming II (2). Prerequisite, COMP 14 or 15. (Only one of COMP 104 - 105, 110, and 114 may be taken for credit.) Together these two courses, taught in consecutive summer sessions, are the equivalent of COMP 110. Summer. Staff.

110 Applications Programming I and II (4). Prerequisite, COMP 14 or 15. (Only one of COMP 104 - 105, 110 and114 may be taken for credit.) A practical course emphasizing techniques appropriate for applications programming and data processing. Programming style; control and data structures; use of secondary storage; efficiency of computation and storage. Hardware and software systems. Groves

114 Foundation of Programming (4). Prerequisite, COMP 14 or 15. May not be taken for credit together with COMP 104, 105, 110 or 119. Advanced programming. Program specifications; preconditions; post conditions loop invariants. Linear date structures, searching and sorting. Algorithms paradigms and analysis. Fall and spring. Stanat, Weiss, Calingaert.

120 Computer Organization (3). Prerequisite, COMP 110 or 114. Data representation, computer architecture and implementation, assembler language programming. Spring. Mago, Watanabe, Hedlund..

121 Data Structures (3). Prerequisites, MATH 81 and COMP 114. The analysis of data structures and their associated algorithms. Lists, stacks, queues, trees, and graphs. Hashing and overflow techniques. Sorting and searching. Fall. Halton.

122 Algorithms and Analysis (3). Prerequisites, COMP 121 and MATH 81; permission of the department (except for graduate students in Computer Science). Formal specification and verification of programs. Techniques of algorithm analysis. Problem-solving paradigms. Survey of selected algorithms. Fall. Hedlund, Plaisted, Stanat.

140 Introduction to Translator Systems (3). Prerequisites, COMP 120, 121. Strategies and issues in translation of computer languages. Assemblers, interpreters, phases of high-level language compilation. Includes a significant translator implementation project. Spring, alternate years. Staff.

142 Introduction to Operating Systems (3). Prerequisites, COMP 120, 121. Types of operating systems. Concurrent programming. Management of storage, processes, devices. Scheduling, protection. Case study. Students implement significant components of a small operating system. Spring, alternate years. Jeffay.

145 Software Engineering Laboratory (3). Prerequisites, COMP 120 and 121. (Open to graduate students in Computer Science and honors undergraduates in the Computer Science Option.) Organization and scheduling of software engineering projects, structured programming, and design. Each team will design, code, and debug program components and synthesize them into a tested, documented program product. Spring. Schwab, McHugh, Coggins.

151 Numerical Computing *(MATH 171)* (3). Prerequisites, COMP 14 or 15, and 4 semesters of mathematics including calculus through MATH 32 and elementary linear algebra. Studies, through mathematical models, the behavior of computers in performing numerical tasks. Topics include efficiency, error generation and propagation, and numerical computing strategies for a variety of problems. Fall. Mago, Halton,

170 Applications of Natural Language Processing *(LIBS 170)* (3). See course listings for School of Information and Library Science for details.

171 Natural Language Processing *(LIBS 115)* (3). Prerequisite, COMP 14 or 15. Statistical, syntactic, and semantic models of natural language. Tools and techniques needed to implement language analysis and generation processes on the computer. Fall, alternate years. Weiss., J.B. Smith.

172 Information Retrieval *(LIBS 172)* (3). See course listings for School of Information and Library Science for details.

172L Information Retrieval Laboratory *(LIBS 172L)* (0).

181 Models of Languages and Computation (3). Prerequisites, COMP 14 or 15 and MATH 81 or permission of instructor. Introduction to the theory of computation. Boolean functions, finite automata, pushdown automata, and Turing machines. Unsolvable problems. The Chomsky hierarchy of formal languages and their acceptors. Spring. Halton, Tyagi, Plaisted.

190 Topics in Computer Science (Var.). Prerequisite, permission of the instructor. This course will have variable content and may be taken multiple times for credit. Fall or spring. Staff.

Department of Dramatic Art

Milly S. Barranger, *Chair*

The Department of Dramatic Art of UNC-Chapel Hill is one of the oldest university drama departments in the country. It counts among its alumni distinguished theatre and television artists, literary figures, and theatre scholars as well as leaders in educational theatre.

The undergraduate program is part of the general curriculum within the College of Arts and Sciences and the General College. In the context of liberal arts studies, the Dramatic Art student has the opportunity to learn about theatre in the classroom. The presence of PlayMakers Repertory Company (a full-season professional Equity theatre) with its resident and guest professionals provides opportunities for students to associate with and learn from theatre professionals active in the regional and commercial theatre.

Students majoring in Dramatic Art receive a Bachelor of Arts degree. The department intends for undergraduate studies in theatre to center within the classroom (and a core curriculum). In this program the student acquires a broad basis for understanding and appreciating theatre as a cultural and artistic process. The program also provides opportunities for students to learn and develop basic skills in the various areas of theatre. During the process, the student develops a discriminating attitude towards quality in theory and practice. The department, moreover, has proved especially suited to those pursuing professional or academic careers in theatre after completion of the B.A. degree. In addition, the Dramatic Art major provides suitable background for work in such related fields as teaching, advertising, journalism, and business.

The Department of Dramatic Art offers a broad-based curriculum leading to the Bachelor of Arts degree. This program is centered in a required core group of seven courses (Drama 50, 62, 64-1, 64-2, 81, 82, and 83), and three electives for the ten-course major. Drama 20 (Play Analysis) is a prerequisite to the dramatic art major, and does not count toward the ten-course major. Majors must take Drama 20 prior to enrolling in Drama 50, 62, 81, 82 or 83. The Department also offers an honors program (Drama 99) in scholarly or creative projects for eligible students.

The College of Arts and Sciences allows a total of 40 hours to count toward graduation in a student's major field. This permits a student to choose as many as six additional courses and concentrate on a particular field of interest within the major.

Because this program exists within liberal arts colleges, coursework and classroom assignments are always a first priority. Nevertheless, students should realize that production work is as important to fulfill as any other commitment. The faculty realizes that productions make great demands on the time of all participants: actors, stage managers, designers, directors, technicians, and crews. Students naturally place a priority on work presented to the

public. However, students must realize that in a Bachelor of Arts degree program such commitments are extra work beyond classroom responsibilities. They must, therefore, thoroughly organize their time and commitments when obligating themselves to any production, so that classroom work is not diminished in quality or quantity. The faculty encourages all students to develop the necessary discipline to fulfill their classwork and production activities.

The Dramatic Art Department provides undergraduates with opportunities to study and engage in live theatre with other students, a professional faculty, and visiting professional artists. Extensive performance work is done in the Laboratory Theatre ("The Lab") located in Graham Memorial, where undergraduates themselves produce a season of 10 or more productions. Undergraduates may audition for PlayMakers Repertory Company (PRC-a professional Equity theatre on campus and a member of the League of Resident Theatres) and upon occasion be cast in appropriate roles. They are also strongly encouraged to become involved in technical assistance and assignment to running crews with the professional theatre. Auditions for Departmental productions are open to all registered undergraduate students within the University, not just drama majors. Dramatic Art majors are required to attend both Departmental and PlayMakers Repertory Company productions as part of their total program.

Students and prospective students may consult the Director of Undergraduate Studies in 206 Graham Memorial Building.

Minors in Dramatic Art

For interested students the Department offers academic minors in dramaturgy and theatrical design.

In the dramaturgy minor, the focus is on dramatic literature, theatre history, dramaturgy, and critical writing. The undergraduate minor in Dramatic Art (dramaturgy) consists of four courses:

DRAM 20 Play Analysis

and three courses selected from the following:

DRAM 81 Literature/History I
DRAM 82 Literature/History II
DRAM 83 Literature/History III
DRAM 84 Dramatic Theory and Criticism
DRAM 86 Latin American Theatre
DRAM 150 Shakespeare in the Theatre.

No production and/or performance courses may count toward the minor and minor courses may not be used to satisfy Arts and Sciences perspective requirements.

Given the interest of nonmajors in our design courses, the faculty proposes a second academic minor in Dramatic Art (theatrical design) to include the following options from courses presently in the curriculum:

DRAM 20 Play Analysis (Required for the minor and offered each semester)

Three additional courses from among the six listed below:

DRAM 165 Sound Design
DRAM 166 Scene Design
DRAM 167 Costume Design I
DRAM 168 Lighting Design
DRAM 169 Costume Design II
DRAM 170 Survey of Costume History
DRAM 171 Non-Western Costume History
DRAM 175 Period Styles for the Theatre

15 Elements of the Drama (3). A survey of plays from the Greeks to the present, analyzed through such elements of the dramatic text as action, character, structure, and language. Fall and spring. Versenyi (General College perspective.)

16 Elements of the Theatre (3). A survey of the interrelationships of acting, directing, designing, and playwriting through the study of major periods of theatrical expression and representative plays. Fall and spring. Rinehart, staff. (General College perspective.)

20 Play Analysis (3). Prerequisite to 50, 62, 81, 82, and 83 for majors. Development of the skill to analyze plays for academic and production purposes through the intensive study of representative plays. Fall and spring, Rinehart, Versenyi, Huey. (General College aesthetic perspective.)

30 Stage Makeup (1). A laboratory course exploring the principles and applications of stage makeup. Also applicable to film and television. May be repeated for credit. Staff.

35 Acting for Nonmajors (3). Introductory course in the principles and practices of stage performance. Fall and spring. Barnett and Staff.

40 Voice Training I (3). Fundamental principles underlying the effective use of the voice and speech in performance. Fall. Staff.

41 Voice Training II (3). Prerequisite, Dramatic Art 40. A continuation of Dramatic Art 40. Spring. Lane.

50 Beginning Acting for Majors (3). Prerequisite, Dramatic Art 20. Development of the actor's craft with emphasis placed on the techniques of modern realism. Scene work will be drawn from plays of American Realism. Fall and spring. Corvinus, Rinehart.

51 Intermediate Acting for Majors (3). Prerequisite, Dramatic Art 50. Development of the actor's technique in verse drama with emphasis placed on textual analysis as the blueprint for characterization. Scene work will be drawn from the works of Shakespeare and his contemporaries. Fall and spring. Corvinus.

52 Advanced Acting for Majors (3). Prerequisites, Dramatic Art 51, 56, 40, and audition. The course furthers the actor's technical development in acting styles other than realism. Course material will be drawn from any of the following: Greek drama, Restoration comedy, Chekhov, or modern nonrealism. Fall and spring. Corvinus.

56 Movement for the Actor (3). An introduction to the range of physical qualities available to the actor through techniques in relaxation, stretch and placement, and Effort/Shape. Fall and spring. Staff.

57 Movement for the Actor II (3). Prerequisite: Drama 56 or Instructor's permission. A continuation of the work in Drama 56 with added emphasis on specific theatre movement techniques, such as stage combat. Spring. Turner.

60 Stagecraft (3). A general survey of the materials, equipment, and processes used in technical theatre. Fall and spring. Coble, Rolleri.

62 Directing (3). Prerequisite, Dramatic Art 20. An introductory course in the principles of stage directing; analysis for concept, organization of production, and methodology of staging. Fall and spring. Hammond, Vensenyi.

64 Technical Methods (3). Introduction to equipment and procedures in the design and execution of plans for the scenery, lighting, and costuming of theatre presentations. One section will concentrate on scenery, and one on costuming. May be repeated for credit. Twelve laboratory hours per week, plus assigned crew work in departmental productions. Fall and spring. Pratt.

65 Dramatic Art Projects (3). Limited to juniors and seniors majoring in Dramatic Art. Permission of Department required. Intensive individual work in major areas of theatrical production: design, technical, directing, acting, playwriting, management. May be repeated for credit. Fall and spring. Staff.

81 Theatre History and Literature I (3). Survey of theatre practice and writing from the Greeks to 1700. Fall. Barranger. (B.A. perspective.)

82 Theatre History and Literature II (3). Survey of theatre practice and writing from 1700 to 1920. Spring. Barranger, Versenyi. (B.A. perspective.)

83 Theatre History and Literature III (3). Survey of theatre practice and writing from 1930 to the present. Alternate years. Barranger. (B.A. perspective.)

84 Studies in Dramatic Theory and Criticism (3). Seminar in dramatic theory and criticism with emphasis on the modern period. Topics to be selected by the instructor. May be repeated for credit. Alternate years. Rinehart. (B.A. perspective.)

86 Latin American Theatre (3). This course explores the historical and aesthetic development of Latin American theatre, focusing on particular factors that distinguish this theatre from the Western European tradition. Alternate years. Versenyi. (B.A. perspective.)

99 Honors Project in Dramatic Art (Var). Prerequisite, 3.2 cumulative grade point average and permission of Departmental Honors adviser. The completion of a special project (essay or creative endeavor), approved by the Department, by a student who has been designated a candidate for undergraduate honors. Fall and spring. Corvinus.

100 Technical Direction (3 - 6). Prerequisite, Dramatic Art 64, Section 2 or equivalent technical practice in theatre production. Also permission of the instructor. A study of technical and engineering problems in theatre production and standard theatrical drafting and construction conventions. Fall and spring. Rolleri.

101 Stage Management (3). A study of the basic principles and practices of modern stage management. Permission of Department required. Fall and spring. Staff.

150 Shakespeare in the Theatre (3). A study of the literary, stage history, and production problems of representative plays. Fall and spring. Staff. (B.A. perspective.)

155 Playwriting (3). Permission of Department required. A practical course in writing for the stage with studio productions of selected works. May be repeated for credit. Fall and spring. Huey. (B.A. perspective.)

157 Playwriting (3). Prerequisite, at least one semester of Dramatic Art 155. A practical course in writing for the theatre. Spring. Huey.

165 Sound Design (3). The study of general principles of sound design for the theatre. Theory and application of sound design techniques for the stage, including script analysis, staging concepts, special effects, sound plots, and technology. Fall. Emerson.

166 Scene Design (3). Permission of instructor required. General principles of visual design as applied to scenery for the theatre. Instruction in standard techniques of planning and rendering scene design. Spring. Coble. (B.A. perspective.)

167 Costume Design I (3). Prerequisite, permission of instructor required. Studies and practicum in play analysis and costume design for the theatre. Instruction in techniques of planning and rendering costume design. Fall. Coble, Owen. (B.A. aesthetic perspective.)

168 Lighting Design I (3). Prerequisite, Dramatic Art 100 or equivalent training in drafting. General principles of lighting design as applied to the performing arts. Theory and instruction in standard techniques of lighting for the stage. Fall. Gallegos

169 Costume Design II (3). Prerequisites, Dramatic Art 167 and permission of instructor. Practicum in costume design for the theatre focusing on the requirements of professional theatre production and alternative costume design solutions. Spring. Alternate years. Coble.

170 Survey of Costume History (3). A survey of historic costume forms from Ancient Egypt to the present time. Fall and spring. Owen. (B.A. Western Historical perspective.)

171 Non-Western Costume History (3). A survey of the traditional costume forms on the African Continent, in Asia (China, Japan, India), and on the Arabian Peninsula. Spring 1994. Owen *(B.A. Non-Western/Comparative Perspective.)*

172 Special Topics in Costuming (3). Course includes subjects in the aesthetics of costume design and history as related to the organization and construction of theatrical costumes. Spring. Alternate years. Coble.

173 Costume Construction I (3). Prerequisite, permission of instructor. Instruction in pattern making through flat drafting and draping, as well as fitting and construction techniques as applicable to theatrical costuming. Fall. Staff.

174 Costume Construction II (3). Prerequisite, Drama 173, or permission of instructor. Continuation of instruction and construction techniques begun in Drama 173. Spring. Staff.

175 Period Styles for the Theatre (3). A study of visual, cultural, and social styles through history as the forms developed, and as they relate to stylistic production for the theatre. Spring. Coble. (B.A. Western Historical perspective.)

177 Principles of Design (3). Studies and practicum in the principles of design applied to designing for the stage, with emphasis on the principles of unity between scenery, costume, and lighting. Fall. Coble. (B.A. aesthetic perspective.)

190 Theatre Management (3). Practicum in theatre management procedures and business of the theatre involving box office, audience development, research, publicity, operational and contract procedures in regard to artists, technicians, managers and producers. Students actively engage in management areas of the PlayMakers Repertory Company and productions of the Department of Dramatic Art. Fall and spring. Thorp.

192 Special Studies (Var. 0.5 - 3.0). Permission of undergraduate adviser. Credit for performance and/or production experience in Department of Dramatic Art productions, including PlayMakers Repertory Company. A minimum of 15 hours per week is required during the rehearsal period and a faculty evaluation at the close of the production. May be repeated for credit. Fall and spring. Corvinus.

194 Professional Theatre Laboratory (3 - 12). Individual programs or internship in acting, directing, design, management, and playwriting under the guidance of professional practitioners in conjunction with the PlayMakers Repertory Company or other professional theatre organizations. Open only to advanced students with permission of the department Chair required. Offered as required. Staff.

Curriculum in East Asian Studies

J.B. Farquhar, *Chair. Advisory Committee*: J. Bachnik, H. Chi, W. M. Fletcher, Eric Henry, M. H. Hunt, Y. Ju, L. D. Kessler, M. Meade, D. Nonini, J. H. Sanford, J. P. Seaton, T. Takai, J.P. Waghorne, J. W. White, Y. Yoshimoto, X. Zhao.

The East Asian Studies Curriculum provides an undergraduate student with the opportunity to undertake an interdisciplinary study of East Asia. Faculty members and departments in both the Social Sciences and Humanities cooperate in offering courses in a wide range of subjects dealing with the historical and cultural development of East Asia. The Curriculum's goal is to promote an understanding of East Asian peoples based on an awareness of their rich and varied heritage.

Bachelor of Arts with a Major in East Asian Studies

General College: all requirements of the General College must be met.

Third and fourth years: the major in East Asian Studies consists of an interdisciplinary core of eight courses and four language courses.

Core requirements: the interdisciplinary core must consist of eight courses, with a minimum of two courses chosen from each of the following divisions:

Humanities: Art 124; Chinese 50, 51, 115, 133, 134, 144, 145; Japanese 115; Linguistics 162; Religious Studies 39, 66, 67, 99 (when offered on East Asia), 161, 162, 163, 176, 177. *Social Sciences:* Anthropology 20, 101, 147, 148, 174, 182, 189; Geography 166, 167; Political Science 54, 85, 95 (when offered on East Asia), 123, 124, 125. *History*: History 33, 34, 83, 84, 86, 87, 88, 90 (when offered on East Asia), 94E, 153, 197.

With the approval of the Director of East Asian Studies, a student may substitute a course in directed readings for one of the courses in the core.

Language Requirements: majors must take four courses in East Asian languages, preferably in a single language. The following courses are offered in Chinese and Japanese languages: Chinese 1 - 2, 3 - 4, 110 - 111, 112, 113, 115, 120 - 121; Japanese 101 - 102, 103 - 104, 105 - 106, 107 - 108, 115. Students who have not met these requirements will be expected to make them up in their junior and senior years.

Honors: a candidate for honors in East Asian Studies will write a substantial research paper under the guidance of a faculty member in East Asian Studies. While researching and writing the honors paper, the student will enroll in EAST 97 and 98, which substitute for two courses in the core. The candidate will be examined by a committee composed of three faculty members, at least two of whom will be in the East Asian field.

Prospective majors should see the Curriculum Director or Adviser.

90 Topics in East Asian Studies (3). The topic of this course will vary with the instructor. The class will be limited to a seminar size, and students must receive permission from the instructor to register. Fall or spring. Staff.

91 Independent Readings (3). For the student who wishes to create and pursue a project in East Asian Studies under the supervision of a selected instructor. Permission required. Course is limited to 3 credit hours per semester. Fall or spring. Staff.

97 Senior Honors Essay (3). Required for honors students in East Asian Studies. Fall. Staff.

98 Senior Honors Essay (3). Required for honors students in East Asian Studies. Fall. Staff.

The Curriculum also offers a program of study leading to undergraduate academic minor in Chinese or Japanese.

Minor in Chinese (East Asian Studies)

The undergraduate minor in Chinese consists of five courses beyond Chinese 3, with the first three language courses (Chinese 1, 2, and 3) being the prerequisite.

At least three of the five core courses must be chosen from among the following:

CHIN 4	Intermediate Chinese
CHIN 110	Advanced Chinese
CHIN 111	Advanced Chinese
CHIN 112	Readings in Chinese
CHIN 113	Readings in Chinese
CHIN 115	Topics in Chinese Literature and Language
CHIN 120	Literary Chinese
CHIN 121	Literary Chinese

and the other two courses may be chosen from among the following:

CHIN 50	Introduction to Chinese Civilization
CHIN 51	Chinese Culture through Narrative
CHIN 33	Chinese Literature in Translation through the T'ang
CHIN 34	Chinese Literature in Translation since the Sung
CHIN 144	Chinese Literature in Translation (topics in Chinese poetry)
CHIN 145	Topics in Chinese Prose.

Descriptions of Chinese courses are found in the Curriculum in Linguistics section.

Minor in Japanese (East Asian Studies)

The undergraduate minor in Japanese consists of four language courses beyond Japanese 103, with the first three courses (Japanese 101, 102, and 103) being prerequisite. These four language courses may be chosen from among the following:

JAPN 104	Intermediate Japanese
JAPN 105	Advanced Japanese
JAPN 106	Advanced Japanese
JAPN 107	Literary Japanese
JAPN 108	Literary Japanese
JAPN 115	Topics in Japanese Language and Literature

Descriptions of Japanese courses are found in the Curriculum in Linguistics section.

Department of Economics

Robert E. Gallman, *Chair*

The Department of Economics offers courses leading to a B.A. degree with a major in economics through the College of Arts and Sciences. The M.S. and Ph.D. degrees in economics are offered through the Graduate School. Courses in economics are elected by and/or required of students in other departments and schools.

Undergraduate Major

Opportunities for Economics Majors: The courses leading to a B.A. degree with a major in economics comprise a large area of inquiry into the problems and structure of the economic segment of society. The curriculum available provides the opportunity to achieve one or more of the following objectives.

A. General education for intelligent citizenship with special emphasis upon the development of the understanding of the principles and problems of modern economic life.
B. Preparation for private employment. In pursuing this objective, supplementary courses in business administration (especially accounting courses) may be selected and integrated with the student's program.
C. Preparation for governmental employment.
D. Preparation for graduate programs in economics, business administration, international studies, law, health and hospital administration, city planning, public policy, and other fields.
E. Specialized combination undergraduate programs permitting double majors and interdisciplinary studies.

Requirements: For a B.A. degree with a major in economics:

A. Students should complete the work of the General College, including at least one calculus course (Mathematics 22 or 31 is recommended; Mathematics 1 is not acceptable). Economics 10 should be taken, with a grade of C or better. Economics 70 may be taken after completion of a calculus course.
B. In the College of Arts and Sciences a minimum of 20 courses, or 60 semester hours, must be completed in accordance with the following distribution:

1. Seven courses in economics, in addition to Economics 10, are required. They must include Economics 101 and 132 (and Economics 70, if not taken while in General College). However, Economics 9, 36, 59, 71, 100, 130, 140, 145, and 190 cannot be counted among the seven required economics courses. A grade of C or better must be attained in at least six of the seven major courses. *(NOTE: One exception to these rules is completion of Statistics 23 and Business 24 meets the Economics 70 requirement, although seven economics courses in addition to Economics 10 must still be taken in this case.)*
2. For majors in the department's Honors Program the minimum is eight economics courses rather than seven courses, in addition to Economics 10. The same provisions apply to these courses as in A. above, except that Economics 98 and 99 must constitute two of the eight courses.
3. At least one course in the major must be an "advanced course." Courses presently eligible for fulfilling this requirement are Economics 99, 142, 148, 162, 170, 180, 181, 182, 183, 185, and 195.

Maximum Number of Economics Courses: A major may offer as many as 13 courses in economics, or 40 hours, for credit toward a B.A. degree.

Program for Honors Work: A student may, as a result of distinguished work, be awarded a degree with Honors or Highest Honors. The details of this program are available at the departmental office.

NOTE: Economics 10 or equivalent is prerequisite to all courses numbered above 90. In addition, University graduation credit will be given for only one in each of the following sets of courses:

(1) Economics 100 and 101
(2) Economics 130 and 132
(3) Economics 130 and 185
(4) Economics 135 and 138
(5) Economics 94A, 140 and 141
(6) Economics 145 and 147
(7) Economics 190 and 194

9 Freshman Seminar in Economics (3). Discussion of economic topics of current interest for students with little or no background in economics. Fall or spring. Staff.

10 Introduction to Economics (3). Introduction to fundamental issues in economics including competition, scarcity, opportunity cost, resource allocation, unemployment, inflation, and the determination of prices. Fall and spring. Staff.

36 Economic History of Western Europe (3). Main features of the emergence and expansion of capitalism since 1500. Spring. Gallman.

59 Introduction to the History of Economic Thought (3). Introduction to the development of economic thought from the Mercantilists, through Smith and the Classicists, Marx, the Neoclassicists to Keynes. Spring. McFarland.

67 Comparative Economic Systems (3). A survey of the United States, French, Yugoslav, Soviet and Chinese economic systems. Spring. Rosefielde.

70 Elementary Statistics (3). Sources and collection of data, tabular and graphic presentation, averages, dispersion, time-series, correlation, index numbers, reliability of statistics and tests of significance. Fall and spring. Staff.

71 Introduction to Public Policy Analysis *(Political Science 71, Public Policy Analysis 71, Sociology 71)* (3). A systematic analysis of the motives for governmental actions and investigation of the problems of policy formation, measurement and prediction of the outcomes. Fall and spring. MacRae, Wilde.

91 Women and Economics *(Women's Studies 91)* (3). Survey of women's time allocation patterns, labor force participation trends, earnings, occupational selection, and economic history using

neoclassical economic analysis. Examinations of contemporary issues such as pay equity, affirmative action. Spring. Willis.

92 Current Economic Problems (3). Analysis and discussion of current policy issue using an economic framework. Topics such as tax reform, environmental controls, announced prior to each offering. Fall or spring. Staff.

94A Public Finance and Public Choice (3). Application of optimization principles to individual choice in various public finance situations. Alternative means of aggregating these preferences within a public choice framework are explored. Students may not receive credit for both Economics 94A and 140 or both Economics 94A and 141. Fall or spring. Wilde.

98 Honors Course (3). Prerequisite, permission of instructor. Readings in economics and beginning of directed research on an honors thesis. Required of all candidates for graduation with honors in economics. Fall and spring. Staff.

99 Honors Course (3). Prerequisite, Economics 98 and permission of instructor. Completion of an honors thesis under the direction of a member of the faculty. Required of all candidates for graduation with honors in economics. Fall and spring. Staff.

100 Microeconomics Theory and Applications *(PUPA 100)* (3). Analysis of the ways in which consumers and business firms interact in a market economy. Students may not receive credit for both Economics 100 and 101. Fall and spring. Staff.

101 Intermediate Theory: Price and Distribution (3). Prerequisites, Economics 10 and Mathematics 22 or equivalent. The determination of prices and the distribution of income in a market system. Students may not receive credit for both Economics 100 and 101. Fall and spring. Staff.

111 Resource and Environmental Economics (3). Prerequisite, Economics 100 or 101 or permission of instructor. Overview of the economic theory and analytical tools involved in understanding environmental and resource problems. Focus on economic issues involved in: air and water pollution; natural environments; exhaustible resources and energy. Fall or spring. Staff.

120 Location and Space Economy (3). Prerequisite, Economics 100 or 101 or permission of instructor. The course is designed to provide the student with an understanding of the effects of space on economic and social activity. Fall. Staff.

122 Urban Economics *(City and Regional Planning 122)* (3). Prerequisite, Economics 100 or 101 or permission of instructor. The course will explore the urban problems facing us today: unorganized growth, disparate land uses, fiscal crisis, the ghetto poverty, employment, housing, transportation inadequacies, and crime. Fall or spring. Staff.

130 Money, the Financial System, and the Economy (3). Analysis of the role of money in the economy, its creation and management, institutional setting, policy implications, and interrelationships with other variables in determining the level of economic activity. Students may not receive credit for both Economics 130 and 132 or both Economics 130 and 185. Fall and spring. Staff.

132 Intermediate Theory: Money, Income and Employment (3). An introduction to contemporary macroeconomic concepts and analysis. Topics include the level, fluctuations, and growth of national income, and monetary and fiscal policies designed to achieve economic goals. Students may not receive credit for both Economics 130 and 132. Fall and spring. Staff.

135 Economic History of the United States (3). Main features of the American economy: colonial times to the present. Fall and spring. Gallman, Orsagh, Rhode.

137 Revisionist Economic History (3). Prerequisite, permission of instructor. A critical evaluation of recent controversies in economic history, concentrating on methods but attending as well to the main reinterpretations offered by economic historians. Fall. Gallman.

138 Economic Development of the United States (3). Prerequisites, Economics 101 and 132. Students may receive credit for either Economics 135 or Economics 138 but not for both. This course parallels Economics 135 but is designed for students with a higher level of theoretical preparation. Fall. Gallman, Orsagh, Rhode.

140 Introduction to Public Finance (3). Principles and practices of the budgetary activities of American governments - federal, state, and local. Students may not receive credit for both Economics 140 and 141 or both Economics 94A and 140. Fall. Akin, Coates, Wilde.

141 Analysis of Public Finance (3). Prerequisite, Economics 100 or 101. Application of economic analysis to the taxing and spending functions of government. Students may not receive credit for both Economics 140 and 141 or both Economics 94A and 141. Fall and spring. Akin, Coates, Lee, Wilde.

142 Advanced Topics in Public Finance (3). Prerequisite, Economics 140 or 141. Selected topics in taxation, public expenditures and governmental transfer programs. Fall or spring. Akin, Coates, Wilde.

145 Public Policy Toward Business (3). Prerequisite, Economics 100 or 101. Industry structure and its relation to performance; market imperfections; description and analysis of antitrust and regulation. Students may not receive credit for both Economics 145 and 147. Fall and spring. Biglaiser, McFarland, Stewart.

147 Industrial Organization (3). Prerequisite, Economics 101. Theoretical and empirical development of structure-conduct-performance relationships in the industrial sector; description and analysis of U.S. industry. Students may not receive credit for both Economics 145 and Economics 147. Fall and spring. Biglaiser, McFarland.

148 Advanced Topics in Industrial Organization and Social Control (3). Prerequisite, Economics 145 or 147. Theory of market failure and its relationship to antitrust and regulatory policy; exploration of empirical literature of industrial organization; current issues in social control. Spring. Stewart.

150 Introduction to Health Economics (3). Prerequisite, Economics 100 or 101. An economic analysis of the production and distribution of health care. Fall. Akin.

151 Transportation Economics (3). Application of economic principles to transportation topics such as pricing and regulation, the public provision of transport services, the relationship between transport cost and location. Fall or spring. Tauchen.

158 Health Economics: Problems and Policy (3). Economic analysis applied to problems and public policy in health care. Fall. Akin.

159 History of Economic Doctrines (3). A survey of the fundamental forms of economic thought from the scholastics through Keynes. Fall. McFarland.

160 European Economic Integration (3). Prerequisite, Economics 100 or 101 or permission of instructor. Economic and political aspects of European economic integration, the EC customs union, barriers to integration, convergence vs. divergence of inflation rates and income levels, enlargement of the EC. Fall or spring. Black.

161 International Economics (3). Prerequisite, Economics 100 or 101. An introduction to international trade, the balance of payments, and related issues of foreign economic policy. Fall and spring. Black, Conway, Field. Hagiwara.

162 Topics in International Economics (3). Prerequisite, Economics 161. Analysis and interpretation of selected problems and policy issues. Content varies, but attention is given to such topics as trade barriers, trade patterns, floating exchange rates, and international monetary policy. Fall and spring. Conway, Darity, Field.

163 Economic Development (3). Prerequisite, Economics 100 or 101 or permission of instructor. An introduction to the economic characteristics and problems of the less developed countries and to the theories and policies applicable to the developing economy. Fall and spring. Conway, Darity, Field.

165 Economics of Population (3). Analysis of economic-demographic interrelations including demographic analysis, population and economic growth and development, economic models of fertility and migration, and population policy. Fall or spring. Turchi.

166 Crime and Criminal Justice: An Economic Approach (3). Prerequisite, Economics 10 or permission of instructor. The application of economic theory and methodology to the determination of criminal behavior and the societal response to that behavior. Fall. Orsagh.

167 Crime and Microeconomic Decision-Making (3). Criminal victimization of business firms and public agencies. Optimizing behavior: theory and practice for private business firms and criminal justice system. Emphasizes application of theory to real-world situations. Spring. Orsagh.

168 The Soviet Economy: Planning and Socialism (3). The institutional structure of the Soviet economy, its socialist character and evolution, analysis of Soviet planning practice, the Soviet growth achievement, comparative U.S.-Soviet performance and current reforms. Fall. Rosefielde.

170 Economic Applications of Statistical Analysis (3). Prerequisite, Economics 70 or equivalent. Statistical methods in the construction, estimation, testing, and application of linear economic models; computer programs and interpretation of their output in empirical analysis of common economic theories. Fall and spring. Coates, Guilkey, Herce, Murphy, Parke.

180 Economics of the Family (3). Prerequisite, Economics 101 or permission of instructor. Analyzes the family with respect to the marriage market, divorce, reproductive behavior, the baby black market, intra-family allocation of goods, time and power, labor supply, migration, and family policy. Fall, spring. Turchi.

181 Topics in Microeconomic Theory (3). Prerequisite, Economics 100 or 101. A treatment of topics in microeconomic theory not normally covered in Economics 100 or Economics 101. Spring. Friedman, Lovell, Tauchen.

182 Topics in Macroeconomic Theory (3). Prerequisite, Economics 130 or 132. This course will emphasize theoretical and empirical topics such as growth, labor search, Phillips curves, stagflation, and optimal government policy. Fall. Salemi.

183 Game Theory in Economics (3). Prerequisites, Economics 101 and Math 33 or permission of instructor. Topics in noncooperative and cooperative game theory are covered, along with a selection of applications to economics in areas such as industrial organization, international trade, public finance, and general equilibrium. Fall. Friedman.

185 Financial Markets and Economic Fluctuations (3). Prerequisite, Economics 132. An examination of financial institutions and markets, their role in economic conditions and the use of macroeconomic policies in affecting those conditions. Students may not receive credit for both Economics 130 and 185. Fall and spring. Conway, Froyen, Parke, Salemi, Waud.

190 The Economics of Labor Relations (3). Prerequisite, Economics 100 or 101. An economic analysis of workplace issues, including worker quits, layoffs and unemployment, discrimination and affirmative action, and the setting of pay, fringe benefits, and working conditions. Students may not receive credit for both Economics 190 and 194. Fall and spring. Blau, Lovell, Rapaport, Willis.

193 History of the Labor Movement (3). A history of the labor movement in the United States, with special reference to its economic significance. Spring. Gallman.

194 Labor Economics (3). Prerequisite, Economics 101. An introduction to the field of labor economics with emphasis on how the interactions between firms and workers influence wages, employment, unemployment, and inflation. Students may not receive credit for both Economics 190 and 194. Fall and spring. Blau, Mroz, Rapaport. Willis.

195 Topics in Labor Economics (3). Prerequisite, Economics 194. A theoretical and empirical analysis of current social problems involving individuals and their jobs. Included are such topics as poverty, discrimination, and working conditions. Spring. Blau, Mroz, Rapaport.

199 Seminar in Economics (3). Detailed examination of selected problems in economics and a critical analysis of pertinent theories. Fall and spring. Staff.

Department of English

Laurence G. Avery, *Chair*

Prerequisites

Except for those exempted by placement examination, English 11 and 12 are prerequisite to all other English courses. Transfer students majoring in English may appeal this prerequisite by writing the Department Chair.

Majors in English in the College of Arts and Sciences: A student choosing English as his or her major field should take English 20, 21* in the General College; and (a) English 58**; (b) two of the following: English 45, 51, 52, 54 60, 64, 65, 66; (c) one of the following: English 43, 72, 73, 78; (d) two of the following: English 80, 81, 82, 83 (one of which must be 80 or 81); (e) one of the following: English 91, 93, 95. A student must have a grade of C or better in at least eighteen semester hours in courses numbered 30 and above.

Majors in English in the School of Education

A student who is interested in teaching English in the public high schools should consult the School of Education for information on the program leading to teacher certification. (See "School of Education" in Part III.) The English requirements are: (a) English 20, 21, 30 or 31, 36, 38, 58, 84 or 85, Speech 41; (b) one of the following: English 51, 52, 54, 60, 64, 65, 66, Comp. Lit. 21; (c) one of the following: English 43, 72, 73, 78, Comp. Lit. 22; (d) two of the following: English 80, 81, 82, 83***; (e) one elective in English. A student must have a grade of C or better in at least eighteen semester hours in the major, and must have an overall average of C or better in all courses taken for the major.

The Creative Writing Program

The Creative Writing Program is organized in two sequences - fiction and poetry. Work in the lower numbered classes is essential to the understanding of the

techniques of writing and the language of criticism used in the advanced courses. Therefore, English 23W is a requirement for any student wishing to take an advanced workshop in fiction. English 23W is open to anyone without permission of an instructor.

English 25W is the course required of anyone wishing to take advanced poetry workshops and is open to anyone without permission of an instructor. A permission slip from the Director of Creative Writing is a prerequisite for admission to all advanced courses: English 34, 34P, 35, 35P, 99A, 99B. (English 47W, a study in stylistics, is not part of the sequences and may be taken at any time without special permission.)

Honors in English and Writing

See College of Arts and Sciences.

10 Basic Writing (3). Required of all incoming students with Verbal SAT scores of 400 or lower, except those exempted by placement tests. Provides frequent practice in writing, from short paragraphs to longer papers. When necessary, written assignments may be supplemented by work in the Learning Skills Center. Fall and spring. Staff.

11 English Composition and Rhetoric (3). Required of all students except those exempted by placement tests. Students analyze and create writings that define social, cultural, and professional communities. Eight papers, including research projects. Fall and spring. Staff.

12 English Composition and Rhetoric (3). Required of all students except those exempted by placement tests. Students analyze and create arguments. Eight papers, including a researched argument and an analysis of a work of fiction. Fall and spring. Staff.

13 Advanced Expository Writing (3). Required of all entering (Fall) freshmen who have exempted English 11. Organization and presentation of information and ideas, clarifying complex relationships, interpreting and evaluating, presenting a logical case persuasively, adapting presentation to circumstances and readers. The focus is on writing produced in the humanities and journalism.

20 British Literature, Chaucer to Pope (3). Required of English majors. Survey of Medieval, Renaissance, and Neoclassical periods. Drama, poetry, and prose. Fall and spring. Staff.

21 British Literature, Wordsworth to Eliot (3). Required of English majors. Survey of Romantic, Victorian, and Modern Periods. Poetry, novels, and plays. Fall and spring. Staff.

22 American Literature, Beginning to 1950 (3)* Survey of American literature from beginnings to 1950. Fall, spring. Staff.

23 Introduction to Fiction (3). Freshman and sophomore elective, open to juniors and seniors. Novels and shorter fiction by Defoe, Austen, Dickens, Faulkner, Wolfe, Fitzgerald, Joyce, and others. Fall and spring. Staff.

23W Introduction to Fiction (3). English 23W or 29W is prerequisite to English 34. A close study of 100 short stories and short works of fiction with emphasis on technical problems. Class criticism and discussion of student exercises in fiction. Fall and spring. Staff.

24 Contemporary Literature (3). Freshman and sophomore elective, open to juniors and seniors. The literature of the present generation. Fall and spring. Staff.

25 Introduction to Poetry (3). Freshman and sophomore elective, open to juniors and seniors. A course designed to develop basic skills in reading poems from all periods of English and American literature. Fall and spring. Staff.

25W Introduction to Poetry (3). Prerequisite to English 34P. Study of narrative, dramatic, and lyric poems as aesthetic processes and objects. Principles of analysis and criticism are applied by students in discussions, reports, papers, and poems of their own. Fall and spring. Staff.

26 Introduction to Drama (3). Freshman and sophomore elective, open to juniors and seniors. Drama of the Greek, Renaissance, and Modern periods. Fall and spring. Staff.

27 Studies in Literature (3). Freshman and sophomore elective, open to juniors and seniors. Consideration of selected aspects of British and American literature. Topics are chosen by individual instructors; students should consult General College advisers or the English Department for current offerings. Offered infrequently. Staff.

28 Major American Authors (3). Freshman and sophomore elective, open to juniors and seniors. A study of approximately six major American authors drawn from Emerson, Thoreau, Hawthorne, Melville, Whitman, Clemens, Dickinson, James, Eliot, Frost, Hemingway, O'Neill, Faulkner, or others. Fall and spring. Staff.

29 Honors: Types of Literature (3 or 6). Freshman and sophomore honors students only. A continuing study of literary forms, beginning in the Fall term and concluding in the spring, with 3 hours credit for each term. Students should consult the Assistant Dean for Honors or the English Department for current offerings. Fall. Kendall, Thornton. Spring. Raper, Mills.

29W Honors: Introduction to Short Fiction (3). English 29W or 23W is prerequisite to 34. Freshman and sophomore honors students only. Close study of the short story, with exercises in writing and practice in the craft of fiction. Fall. Betts, Kirkpatrick.

30 Professional Writing Curriculum (3). This course addresses the requirements of writing in specific professional fields, such as law, psychology, geology, and public health. Classes are dedicated to studying and practicing the discourse conventions of a single discipline. Prepares students to meet the writing demands of the professional workplace as well as graduate school. Fall and spring. Staff.

31 Advanced Composition and Rhetorical Theory (3). Required of English Education majors. Designed for prospective teachers, the course asks students to write frequently and to survey rhetorical theories and strategies for teaching writing. Spring. Staff.

32 Business Writing (3). Clarity, conciseness, and effectiveness of statement; logical and psychological patterns of organization; adaptation to varying audiences. Memoranda, reports, proposals, letters. Fall and spring. Staff.

33 Scientific Writing (3). Clarity, conciseness, and effectiveness, organizing and presenting facts, principles, concepts, and interpretations; abstracts, proposals, progress reports, final reports, oral reports, professional papers, journal articles. Fall and spring. Staff.

34 Creative Writing (3). Permission of Director. Prerequisite, English 23W or 29W. Beginning workshop in fiction. Fifteen or more exercises (15,000-word minimum) in writing description, character sketches, dialogue, exposition, and short stories. Emphasis on the structure of scenes. Informal class discussion of student work. Close examination of exercises in conferences with instructor. Fall. Athas, Henderson, Spring. Betts, Simpson.

34P Poetry Writing (3). Limited to 15 students. Permission of the Director of Creative Writing. Prerequisite, English 25W. A workshop with an intensive examination of selected contemporary poems and of students' own work. Fall and spring. Seay.

35 Advanced Creative Writing (3). Prerequisite, English 34 and permission of the Director of Creative Writing. A workshop class for students seriously interested in writing fiction. A continuation of English 34 with emphasis on the short story and novel. Class

discussion of longer papers by students; analysis of papers in small groups; details studied in conferences with instructors. Fall. Betts, Simpson. Spring. Betts, Henderson.

35P Advanced Poetry Writing (3). Prerequisite, English 34P. Study of forms and techniques of modern poetry, with emphasis on revision based on analysis of language and syntax. Seminar and conferences. Permission of the Director of Creative Writing. Spring.

36 English Grammar (3). A study of modern English grammar (traditional, structural, and transformational) with special attention to such current problems as the confusion of grammatical terminology, attacks on traditional rules, conflict between prescriptive and descriptive grammar. Designed for prospective English teachers, but others may take it. Fall. Williams. Spring. Eble.

38 The English Language (3). Present day English, British and American, standard and dialectal - its historical background and development. The language as a whole is considered, i.e., vocabulary, pronunciation, spelling, etc.; grammar is treated only incidentally. Fall. Eble. Spring. O'Neill.

40 Interpretation of Poetry (3). Exploration of the significance of poetry for thought and human experience. Consideration of forms and substance. Offered infrequently.

41 Principles of Literary Art (3). A study of the theories of literature through their application to specific English masterpieces.

42 Movie Criticism *(RTVMP 42)* (3). Fall. Harper. Spring. O'Connor.

43 The English Novel (3). The English novel in the eighteenth and nineteenth centuries. Fall and spring. Navarette.

45 The English Drama to 1642 (3). The English drama from the beginning to 1642. Spring. Kendall.

46A Studies in Drama (3). An intensive study of a single writer, group, movement, theme, or period in this genre. King.

46B Studies in Drama (3). An intensive study of a single writer, group, movement, theme or period in this genre. Armitage.

47 Studies in Fiction (3). An intensive study of a single writer, group, movement, theme, or period in this genre.

47W Studies in Fiction: Style and Stylistics (3). For students who undertake creative writing or a study of literary forms.

48 Studies in Poetry (3). An intensive study of a single writer, group, movement, theme, or period in this genre.

49 Studies in Literary Topics (3). An intensive study of a single writer, group, movement, theme, or period.

50 Topics in Gender and Literature *(Women's Studies 150)* (3).

51 English Literature of the Middle Ages (3). English writing from the eighth century to the fifteenth, exclusive of Chaucer. Fall. Leinbaugh, O'Neill.

52 Chaucer (3). Chaucer's development as an artist as revealed in his poetry. Fall. Kennedy. Spring. Leinbaugh.

54 Sixteenth-Century English Literature (3). Poetry and prose of representative authors, including More, Wyatt, Sidney, Spenser, Bacon, and Shakespeare's nondramatic poetry. Fall. Hall.

58 Shakespeare (3). Study of twelve to fifteen representative comedies, histories, and tragedies. Fall and spring. Armitage, Barbour, Gless, Haig, Mills, and others.

59 Special Topics in Shakespeare (3). Topics are chosen by the individual instructor. Offered infrequently. Staff.

60 Seventeenth-Century English Literature (3). Bacon, Donne, Herbert, Browne, Herrick, Marvell, Dryden, and others. Fall. Barbour. Spring. Armitage.

63 The Literary Aspects of the Bible (3). The Old Testament or the New Testament.

64 Milton (3). The works of Milton studied in the light of his life, times, and culture. Spring. Barbour.

65 English Drama of the Restoration and Eighteenth Century (3). Drama of the period 1660 - 1775, with special emphasis on the major comic dramatists: Etherege, Wycherley, Congreve, Farquhar, Goldsmith, Sheridan. Fall. Thompson.

66 Prose and Poetry of the Classical Period (3). Dryden, Addison, Steele, Swift, Pope, and Johnson, Boswell and Gray. Fall and spring. Thompson, Stumpf.

72 The Chief Romantic Writers (3). Blake, Wordsworth, Byron, Coleridge, Shelley, Keats, and others. Fall and spring. Kirkpatrick, Moskal, Reed, Viscomi.

73 English Literature, 1832 - 1890 (3). Tennyson, Browning, Arnold, Dickens, Mill, Carlyle, and others. Fall and spring. Life. Taylor.

78 English Literature, 1870 - 1910 (3). Wilde, Swinburne, Yeats, Shaw, Conrad, and others. Fall and spring. Life, Navarette.

80 American Literature Through the Civil War (3). Representative authors from the beginning through the Civil War.

81 American Literature from the End of the Civil War to 1930 (3). Representative authors from the end of the Civil War to 1930. Fall. King. Spring. Rust.

82 American Literature from 1930 to the Present (3). Representative authors from 1930 to the present. Fall and spring. Flora, King, O'Connor, Whisnant.

83 The American Novel (3). The American novel through World War II. Hawthorne, Melville, Clemens, James, Anderson, Hemingway, Faulkner, and others. Fall. Hobson, Raper. Spring. Rust, Ludington.

84 Afro-American Literature to 1950 (3). Survey of Afro-American literature from the beginning to 1950, from the slave narratives through Richard Wright. Fall and spring. M.K. Davis.

85 Afro-American Literature since 1950 to the Present (3). Survey of Afro-American literature from 1950 to the present, Ellison, Baldwin, Jones, Brooks, Hayden, Gaines, and others. Fall and Spring. Coleman, Greene.

86 American Women Authors *(Women's Studies 86)* (3). Beginnings to Turn of the Twentieth Century (1660s to 1910). Fall. Wagner-Martin.

87 Southern Women Writers *(Women's Studies 87)* (3). Southern Women Writers examines thematic and stylistic aspects in the fiction, drama, and poetry of major authors, and explores recurrent motifs in work by less-known writers, particularly those from North Carolina.

88 Southern American Literature (3). An introduction to the Southern Literary Renascence of the twentieth century: poems and fiction by Faulkner, Wolfe, Wright, Toomer, O'Connor, Percy, Styron, Jarrell, etc. Spring. Raper.

89 Canadian Literature (3). A study of Canadian literature in English from the late 18th century to the present, with emphasis on 20th century writing and on the novel. Armitage.

90 An Introduction to Literary Criticism (3) An introduction to literary criticism in English studies, with an emphasis on historical developments from Plato to the present.

90B Feminist Theory and Literary Criticism *(Women's Studies 90B)* (3). Theories of women's writing, the development of a female literary tradition, and the re-evaluation by feminist literary critics of canons.

91 The British Novel from 1870 to World War II (3). Hardy, Conrad, Joyce, Lawrence, Cary, Greene, and others. Fall and spring, Cowan.
92 British and American Fiction since World War II (3). Beckett, Durrell, Golding, Sillitoe, Bellow, Ellison, Malamud, and others. Fall and spring. Cooper.

93 Twentieth Century British and American Poetry (3). Yeats, Eliot, Stevens, and others. Fall and spring. Harmon, Lensing.

94 Capstone Courses *(see below)*

94A The English Language in the United States (3). An historical and critical examination of the development and use of English in the U.S., including such topics as regional and social dialects, the contributions of immigrant groups, and the notion of linguistic correctness. Social Science Perspective. Fall. Eble.

94B The Roots of Modernism (3). Exploration of implicit attitudes and assumptions of the Modern mind-set, tracing their evolution through several centuries of Western thought. Designed to show how these attitudes and assumptions affect our world view. Philosophical Perspective.

94C Literary Genre and Literary Form (3). Two approaches to literary genre: ahistorical and historical. Definitions, cultural signs and tensions, and personal slants of life are examined within the forms of genre.

94D The Romantic Revolution (3). Examines the technical and aesthetic revolutions in the fine arts of the English Romantic Period. It focuses on landscape painting, lyrical poetry, and original printmaking, and includes the works of Blake, Turner, and Wordsworth. Spring. Viscomi.

94E Blacks in the Literature of the Western World (3). A study of black characters in European, African, and North and South American literature. Recurrent images and themes in selected works of poetry, fiction, and drama will be explored using lecture, discussion, and film. Aesthetic perspective.

94F Philosophy, Religion, and Renaissance Literature (3). Philosophical and religious ideas as presented in several books of the Old and New Testaments and in works by Plato, Aristotle, Cicero, Erasmus, More, Machiavelli, Montaigne, Spenser, Shakespeare, and Milton. Philosophical perspective. Gless

94G Theology and Literature (3). A study of theological issues and their presentation in a variety of literary genres. Philosophical perspective. Kendall.

94I American Literature of Resistance and Protest (3). Intensive analysis of literature arising from movements of resistance and protest in the Americas (e.g., labor, human rights, environmental, women, national liberation), usually focusing on a genre, period, or geographical area. Aesthetic perspective. Spring and fall. Whisnant.

95 British and American Drama of the Twentieth Century (3). Fall. King, Zug. Spring. Avery, Zug.

96 Directed Readings in Literature (3). Intensive reading on a particular topic under the supervision of a member of the staff. Not to be elected without special permission of Committee on Honors. Armitage, Kennedy, Lensing, Moskal.

97, 98 Honors (6). See the Program for Honors Work in the College of Arts and Sciences. Reading and the preparation of an essay under the direction of department advisers. Permission of Committee on Honors. Armitage, Kennedy, Lensing, Moskal.

99A Honors in Creative Writing (3). Prerequisite, English 35. The first of a two-semester sequence, three hours credit per semester. Permission of the Director of Creative Writing. Students must have demonstrated a high level of intellectual accomplishment and creative ability. Submission of a substantial body of achieved work in prose, poetry, or both. Fall. Staff.

99B Honors in Creative Writing (3). Prerequisite, English 35 and 99A. The second of a two semester sequence, three hours credit per semester. Permission of the Director of Creative Writing. Students must have demonstrated a high level of intellectual accomplishment and creative ability. Submission of a substantial body of achieved work in prose, poetry, or both. Spring. Staff.

130 Advanced Expository Writing (3). This course is planned to strengthen the writing of graduate students and to ground them in the body of knowledge available to help them confront the writing problems most frequently faced in the worlds of thought, work, and teaching. Open to graduate students in all disciplines.

131 Rhetorical Theory and Practice (3). A study of rhetorical theories and practices from classical to modern times. Emphasis is on translation of theories into practice in contemporary college rhetorics.

134 Advanced Creative Writing (3). Advanced workshop in fiction. Written exercises in the use of scene, point of view, narration, dialogue. Student projects in short story or beginning novel. (Permission of instructor required.)

134S Creative Writing for Teachers (3). For students who undertake creative writing or a study of literary forms. Recommended for teachers of creative writing.

136 Modern English Grammar (3). A study of current English structure and usage using a traditional approach modified by appropriate contributions from structural and generative grammar, with some attention to the application of linguistics to literary analysis. Spring. Eble.

140 Introduction to Literature Theory (3). A study of various critical approaches to literature, including traditional, new critical, psychological, archetypal, etc.

142 Literature and Film (3). An examination of several books made into films, with stress on the relationship of literature to the filmed image. Spring. Harper.

144 Studies in English Literature and the Classics (3). A study of the influences of classical literature upon selected English authors, for example, Horace and Pope.

146 Introduction to Folklore *(Folklore 146) (Comparative Literature 146) (Anthropology 146)* (3). A survey of the primary genres (song, narrative proverb, riddle, custom, belief, drama, game) with attention to their forms, transmission, and functions in traditional and urban societies. Fall. Zug.

147 British and American Folksong *(Folklore 147)* (3). An examination of the form, content, history, and literary relations of British and American folksongs, with emphasis on the ballad, spiritual, blues, and Anglo- and Afro-American song types. Fall. Patterson.

151 English Literature of the Middle Ages (3). A survey of Old and Middle English literature exclusive of Chaucer. Old English texts and Middle English texts with difficult language are read in translation. For nonspecialists. Fall. Leinbaugh.

153 Medieval Romance *(Folklore 153) (Comparative Literature 153)* (3). British and continental Arthurian literature in translation from the early Middle Ages to Sir Thomas Malory. Fall. Kennedy.

154 Sixteenth-Century English Literature, Excluding Drama (3). A survey of major nondramatic genres and of about twenty authors from the period 1485 - 1605. Fall. Mills.

160 Seventeenth-Century English Literature, Excluding Drama (3). A survey of representative examples of English poetry and prose from Donne to Marvell. Spring.

166 English Literature, 1660 - 1780 (3). A survey of English literature from Dryden to Burke. Though the emphasis Falls on Swift, Pope, and Johnson, a considerable amount of reading in minor authors provides essential background for the period. Fall. Stumpf.

172 Romantic Literature (3). A survey of the major English Romantic writers, including Blake, Wordsworth, Coleridge, Shelley, Byron, Keats, with an introduction to the chief scholarly and critical problems in this period. Fall. Reed.

174 Victorian Literature (3). A survey of the major Victorian writers, such as Tennyson, Browning, Arnold, Carlyle, Mill, Ruskin, Dickens, Eliot. Spring. Life.

179 Literature of the Americas *(COMP 179)* (3). Prerequisite, two years of college level Spanish or equivalent. Permission of instructor required. An examination of U.S.-Latin American political, social, and cultural interaction, drawing on a multi-disciplined analysis of representative texts from both the U.S. and Latin America, selected from a variety of genres. Readings and class sections in both English and Spanish. Whisnant.

181 American Literature to 1900 (3). A survey of American authors and literary trends from the seventeenth through the nineteenth centuries, with emphasis on the works of Franklin, Irving, Cooper, Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, Dickinson, Mark Twain, James, and Crane. Fall. Gura.

184 Afro-American Fiction and Poetry (3). An intensive study of fiction or poetry aimed at some comprehension of Afro-American literature as a whole. Spring.

185 Women in Folklore and Literature *(Women's Studies 185) (Folklore 185)* (3). Explores the images of women depicted in the folk imagination from ancient times to the present: sorcerers, conjurers, witches, sexual objects, and tricksters, healers, heroines, avengers, carriers of family tradition. Harris.

186 Folk Narrative *(Folklore 186)* (3). An intensive study of myths, legends, and folktales (märchen, tall tale, animal tale, fable) with attention to their aesthetic and cultural applications. Spring. Zug.

187 Folklore in the South *(Folklore 187)* (3). Exploration of folklore in the South, with emphasis on genres like tales, black and white spirituals, chanted sermons, work songs, blues and dance music. Attention to social and historical backgrounds. Spring. Patterson.

188 Southern American Literature (3). The literature of the South, with special attention to the Southern Literary Renascence of 1930 - 1950. Fall. Hobson. Spring. Raper.

189 Afro-American Folklore *(Folklore 189)* (3). A study of folklore within the black community, concentrating on African and slave backgrounds, and covering rural and urban folktales, spirituals, worksongs, blues, toasts, and folk beliefs. Fall. Harris.

190 English and American Literature of the Twentieth Century (3). A survey of 20th-century English and American drama, poetry, fiction, and criticism.

191 Canadian Literature (3). A study of Canadian literature in English, with emphasis on writing since 1940 by, for example, Margaret Laurence, Robertson Davies, Mordecai Richter, and Margaret Atwood. Spring. Armitage.

194 Literature of the Appalachian Region *(Folklore 194)* (3). Intensive analysis of a broad array of literary works from and about the Appalachian region (e.g., fiction, poetry, drama, autobiography, ballad and song, sermon), with special attention to social and cultural context. Whisnant.

195 British and American Drama of the Twentieth Century (3). A survey of British and American drama, poetry, fiction, and criticism. Avery, King.

196 Images of War in Twentieth-Century Literature *(Peace, War, and Defense 196)* (3). A study of literary works written in English concerning World War I, the Spanish Civil War, World War II, and the Vietnam War.

196A Images of War in Twentieth-Century Literature: The First World War *(Peace, War, and Defense 196A)* (3). A study of the responses to World War I as reflected in poems, novels, memoirs, etc., by British, American, Canadian, Australian writers and by European writers in translation.

196B Images of War in Twentieth-Century Literature: America in Vietnam *(Peace, War, and Defense 196B)* (3). Study of American experience in the Vietnam War, through its expression in personal narrative, fiction, and film. Harper.

Celtic

105A: Old Irish (3). Old Irish language and literature (600 - 900), with the main emphasis on grammar; readings from selected Old Irish glosses (Strachan) and from *Aislinge Oenguso* (Shaw). Fall. O'Neill.

105B: Old and Middle Welsh (3). An introduction to Medieval Welsh language and literature, with selected readings from the Mabinogi and the early nature poetry. (From time to time as alternative to Celtic 105A.) O'Neill.

106A: Readings in Old Irish (3). Prerequisite, Celtic 105A. Readings in genres of Old Irish literature: *Stories from the Táin* (Strachan), *Críth Gablach* (Binchy), *Cambrai Homily, Early Irish Lyrics* (Murphy), *Scéla Mucce Meic Dathó* (Thurneysen). O'Neill.

106B: Readings in Old and Middle Welsh (3). Prerequisite, Celtic 105B. Selected readings from Medieval Welsh poetry (*Cynfeirdd, Gogynfeirdd,* and *cywydd* poets), tales (*Branwen*), and laws (*The Laws of Hywel Dda.*) (From time to time as alternative to Celtic 106A.) O'Neill.

107: Introduction to Modern Irish (3). A basic course in modern Irish grammar and pronunciation; background readings in Irish history and culture. O'Neill.

108: Readings in Modern Irish (3). Prerequisite, Celtic 107. Selected readings from various genres: the autobiography *(Mo Scéal Féin, Peig, Fiche Blian ag Fás)* and poetry (the *aisling* and the *caoineadh*). O'Neill.

109 Introduction to Celtic Culture *(Folklore 109)* (3). A survey of Celtic culture under the headings of mythology, folklore, social organization, language, and literature designed mainly for interested students who do not know any of the Celtic languages. Fall. O'Neill.

* Freshmen enrolling from the Fall 1988 semester to the Spring 1991 semester may take English 22 to fill one of their requirements in American literature (group D).

** English 59 will fulfill the requirement for Group "A" if taken before Fall 1989.

*** One of these must be 80 or 81.

Curriculum in Folklore

Charles G. Zug III, *Chair*

From the offerings of a variety of departments, the Curriculum in Folklore draws together courses relating to folklore (tales, songs, proverbs, riddles, and other forms of oral tradition) and folklife (architecture, arts and crafts, customs and beliefs) of varied ethnic, regional, religious, and occupational groups. While the Curriculum does not presently offer a formal undergraduate major, students may take a concentration in Folklore for the "Interdisciplinary B.A. degree in the College of Arts and Sciences." Those interested in this program should apply through the Director of Interdisciplinary Studies, 317 Steele Building. For information and help in planning a major or minor in folklore, students should consult the Chair in the Curriculum in Folklore, Professor Charles G. Zug III, in 228 Greenlaw Hall.

Minor in Folklore

The undergraduate minor in Folklore consists of five courses:

(A) - FOLK 146, Introduction to Folklore

(B) - Two courses on genre:

(1) - One on music from FOLK 104, 105, 147, 188

(2) - One other from FOLK 134, 148, 186, 192

(C) - One course on community from ANTH 40, FOLK 185, 187, 189, MUSI 89

(D) - One course on theory from FOLK 135, 142, 154, 174, 193.

From time to time, additional courses will be offered by current or visiting faculty. These will be listed on the course description for the term and may be used to fill some of the minor requirements.

(For descriptions of courses below, see listings under department headings.)

103 Folk and Popular Music of Latin America *(Music 132)* (3).

104 Folk Music of Europe and the New World *(Music 104)* (3).

106 Celtic: Readings in Old Irish *(Linguistics 106)* (3). O'Neill.

107 Folk, Popular, and Art Music in 19th Century America *(Music 133)* (3).

108 Music in 20th Century American Culture *(Music 134)* (3).

109 Introduction to Celtic Culture *(Celtic 109)* (3). O'Neill.

121 Culture and Personality *(Anthropology 121)* (3). Fall. Daniels.

122 Cultural Anthropology *(Anthropology 122)* (3). Fall. Staff.

123 Magic, Ritual, and Belief *(Anthropology 123)* (3). Spring. Evens.

126 Africa: Peoples and Cultures *(Anthropology 126)* (3).

129 Southeast Asia: Peoples and Cultures *(Anthropology 129)* (3). Spring. Peacock.

130 Native North American Cultures *(Anthropology 130)* Spring. Staff.

132 Latin American Cultures *(Anthropology 132)* (3). Fall. Finkler.

133 The People of the Caribbean *(Anthropology 133)* (3). Fall. Crane.

134 Anthropology of Art and Culture *(Anthropology 134) (Art 174)* (3). Johnson.

135 Consciousness and Symbols *(Anthropology 135)* (3). Fall. Peacock.

141 Myths and Epics of the Ancient Near East *(Religion 121)* (3). Spring. Sasson. 142 Religion and Anthropology (Anthropology 142) (Religion 142) (3). Spring. Peacock, Tyson.

143 Indo-European Culture and Society *(Linguistics 142)* (3). Fall. Melchert.

146 Introduction to Folklore *(English 146)* (3). Fall. Zug.

147 British and American Folksong *(English 147)* (3). Fall. Patterson.

148 Traditional Craftsmanship (3). An introduction to material folk culture: the study of the origins and transmission, forms and construction, functions and meanings, of traditional architecture, arts, crafts, food, clothing, tools and technology. Spring. Zug.

153 Medieval Romance *(English 153)* (3). Fall. Kennedy.

154 Historical Geography of the United States *(Geography 154)* (3). Florin.

155 Method and Theory in Ethnohistoric Research *(Anthropology 155)* (3). Fall. Crumley.

170 General Introduction to German Volkskunde *(German 170)* (3). Tax.

171 Medicine and Anthropology *(Anthropology 170)* (3). Fall. Finkler.

174 The Theory and Practice of Oral History: A Field Work Approach *(History 170)* (3). Fall. Hall.

175 Ethnographic Method *(Anthropology 175)* (3). Spring. Crane.

184 Language and Culture *(Anthropology 184)* (3). Spring. Holland.

185 Women in Folklore and Literature *(English 185)* (3). Spring. Harris.

186 Folk Narrative *(English 186)* (3). Spring. Zug.

187 Folklore in the South *(English 187)* (3). Spring. Patterson.

188 Country Music and American Society (3). An historical and cultural analysis of country music, exploring its relation to traditional and popular music, its repertory and performers, its institutions, its reflection of social issues, values, and change. Spring. Whisnant.

189 Afro-American Folklore *(English 189)* (3). Fall. Harris.

190 Vernacular Traditions in African-American Music (3). Explores performance traditions in African-American music, tracing development from African song through blues, jazz, gospel and contemporary vernacular expression. Focuses on continuity, creativity and change within African-American aesthetics. Fall. Hinson.

192 Traditional Culture in Film (3). A critical survey of selected documentary films, exploring traditional culture itself, issues inherent in the comprehension and interpretation of culture, and the politics of culture in a multicultural society. Fall. Alternate years. Whisnant.

193 The Politics of Culture (3). A comparative, historical, multidisciplinary analysis of the politics of culture. Special attention to cultural regionalism and nationalism; legitimization, marginalization, survival and revitalization; documentation, preservation and presentation; policies, institutions, and programs. Fall. Whisnant.

194 Literature of the Appalachian Region *(English 194)* (3). Whisnant.

198 Field Research (3). Fall and spring. Staff.

199 Directed Readings in Folklore (3). By permission. Fall and spring. Staff.

French

(See Romance Languages)

Department of Geography

John W. Florin, *Chair*

Geographers are concerned with an analysis of the spatial aspects of cultural and physical phenomena, their interrelationships and their composite expression in the form of regions. They work as teachers and in a growing number of applied fields. Government agencies offer a variety of opportunities in such fields as cartography and map analysis, census work, air photo interpretation and remote sensing, resource and land-use surveys, and foreign area intelligence. Industrial concerns, banks, property development and management firms, research organizations, and

federal, state, and municipal agencies employ sizeable numbers of geographers as field investigators, location analysts, and planners. Geographic skills find application in such business activities as banking, real estate, and commercial outlet locations and in the expanding national recreation and travel fields.

To earn a Bachelor of Arts in geography a student must pass a total of nine courses in the discipline. They will include (a) Geography 10 or 11, (b) Geography 20, (c) Geography 148, (d) either Geography 70 or 171, (e) one regional geography course, (f) two systematic (topical) courses, and (g) any two other geography courses (one must be a methods course if Geography 70 was selected in (d) above). The student must also complete the General Education requirements for the Bachelor of Arts degree.

9 Freshman Seminar (3). Topics are chosen by individual instructors. General College advisers have a list of current offerings. Fall and spring. Staff.

10[1] Physical Geography *(Man's Physical Environment)* (3). An assessment of the occurrence, characteristics and interrelationships of the earth's climates, landforms, natural vegetation and soils, especially as they influence man's attempt to utilize his environment. Fall and spring. Staff.

11[2] Weather and Climate (3). An introduction to the nature and causes of weather variability and climate change and their impact on human activity. Fall and spring. Staff.

20 The Character of World Regions *(PWAD 20)* (3). A survey of the geographic structure of human activity in major world regions and nations. Emphasis is upon current developments related to population, urbanization, and economic activity. Fall, spring, summer. Staff. 21 Cities of the World (3). This is a course in comparative world urban development. Building on a knowledge of American cities, the urban experience in Western Europe, the Communist World, and the Third World is examined. Browning.

22 Geography of Economic Activity (3). A study of the factors influencing the characteristics and spatial patterns of the world's major economic activities with a particular focus on the distinctions between developed and developing nations. Fall. Browning, Moriarty.

23 Cultural Landscapes (3). How population, environment, and human culture as expressed in technology and organization interact over space and time. Spring. Gesler.

30 Development Issues Third World (3). Population and ecological aspects of problems in the urban, industrial and agricultural development of Third World nations from a geographical perspective. Meade.

57 North America's Landscapes (3). A survey of the cultural and physical landscapes of the United States and Canada. Emphasis on landscape evolution, present distributions, and interactions between people and their environment. Fall. Florin, Hawley.

62 Geography of North Carolina (3). A survey of the cultural, economic, and physical diversity of North Carolina. Emphasis is placed on regional patterns, historical changes, and the appearance of the landscape. Spring. Browning.

70 Map Interpretation (3). An introductory map-interpretation course for all students interested in geography. Utility of maps is emphasized through the illustration of the map as an earth model permitting data storage and retrieval of locational, spatial and distributional data. Hawley.

95 Topics in Geography (Var.). Permission of instructor required. Special reading and research in geography under the supervision of a selected instructor. Course may not be taken more than twice. Fall and spring. Staff.

98 Honors (3). Required of all senior students aspiring to Honors in Geography. Directed readings, research and writing. Fall and spring. Staff.

99 Honors (3). Required of all seniors aspiring to Honors in Geography. Preparation of a senior thesis. Fall and spring. Staff.

110[2] Meteorology (3). Natural science credit. Prerequisite, Geography 10 or 11. An analysis of the atmospheric processes acting to create day-to-day weather changes. Techniques of producing weather forecasts, and the value of such forecasts, are discussed. Robinson.

112[2] Micrometeorology (3). Permission of instructor desirable. An introduction to the theory and practice of micrometeorology. Factors influencing rural environments are initially considered and agricultural problems emphasized. Man's role in changing both rural and urban microclimates is assessed. Robinson.

115 Climatology (3). Prerequisite, Geography 10 or 11 or permission of the instructor. The factors creating climates and their spatial variation are considered. Emphasis is given to the nature, causes, and impacts of climatic change. Kopec, Robinson.

116 Applied Climatology (3). Prerequisite, Geography 110 or Geography 115. An investigation of the ways climatic information and techniques can be applied to societal problems, such as energy production, food production and health. Robinson, Kopec.

117[2] Soils (3). A study of the nature and geographic distributions of the soils of the world. Three hours of lecture a week, in addition to field work. Robinson.

122 Physiography of the Eastern United States *(Geology 169)* (3). Prerequisites, Geology 11, Geology 138, or permission of the instructor. Natural science credit. Spring.

132 The World's Food Supply (3). A study of environmental parameters, cultural preferences, technological developments, and spatial economic infrastructure which result in world patterns of food consumption, production, and distribution. Hawley, Meade.

135 Transportation (3). Transportation as a spatial factor in the economic and political integration of regions; also, regional variations in mode development, and application of transportation as a movement system. Birdsall, Gesler.

138 Industrial Location (3). Factors in the regional location of manufacturing location theory, measures of manufacturing, locational theory, measures of manufacturing, locational decision-making, and a survey of selected industries. Fall. Moriarty.

143 Ecological Plant Geography *(Botany 143)* (3). Description of the major vegetation types of the world including their distribution, structure, and dynamics. The principal causes for the distribution of plant species and communities, such as climate, soils, and history will be discussed.

144 Landscape Biogeography (3). This course is concerned with the application of biogeographical principles and techniques to the study of natural and human-modified landscapes. It includes local and extra-regional case studies. Zimmerer.

145 Medical Geography (3). The human ecology of health is studied by analyzing the cultural/environmental interactions that lie behind world patterns of disease distribution, diffusion, and treatment, and the ways these are being altered by development. Fall. Meade.

147 Fundamental Concepts of Physical Geography (3). Prerequisite, Geography 10 or equivalent. Systematic study of the approaches, key concepts, and methods of physical geography. Emphasis given to geomorphic and biogeographic processes and techniques within a thematic framework. Spring. Butler. (B.A. level Natural Science perspective.)

148 Fundamental Concepts of Human Geography (3). A systematic study of the approaches, key concepts, and methods of human geography. Emphasis is given to the cultural landscape and location analysis within a thematic rather than a regional framework. Fall. Florin, Browning.

149 Location, Perception, and Society (3). A study of the spatial components of current social problems, such as poverty, race relations, environmental deterioration and pollution, and crime. Birdsall, staff.

150 Population Geography (3). A study of the spatial dimensions of population growth, density and movement and of the shifts in these patterns as they relate to changes in selected socioeconomic and cultural phenomena. Spring. Florin, Birdsall, Meade.

151 Urban Geography (3). A geographical study of the spatial structure and function of urban settlements. Emphasis is on the regional relations of cities and central place theory. Spring. Browning.

152 Economic Geography (3). An inquiry into the factors involved in the location of agriculture, manufacturing and central place activities within the context of population growth and economic development in different regions of the world. Spring. Moriarty.

153 Political Geography *(PWAD 153)* (3). Geographic aspects (nation formation; boundary, territorial and ethnic issues; and regional blocs) of contemporary international affairs. Case studies are in Eurasia and Africa. Eyre.

154 Historical Geography of the United States (3). A study of selected past geographies of the United States with emphasis on the significant geographic changes in population, cultural, and economic conditions through time. Florin or Eyre.

156 National Resources (3). An analysis of selected biological and mineral resources of the world with particular emphasis on their distribution, utilization, management policies and on their social and economic implications. Fall. Hawley.

158 Europe Today (3). A survey by topic and country of Europe west of the Soviet Union. Those features that made Europe a distinct and important region today are emphasized. Spring. Hawley.

159 Latin America (3). A study of the resources and activities of continental South America and of those aspects of the physical and cultural environment which result in diversity as well as similarity. Fall. Zimmerer.

161 South (3). Present-day southern United States, approached historically through a study of its physical, economic, and cultural environment. Fall. Browning.

165 Geography of the Soviet Union (3). An analysis of the physical setting, resources, economic activities, and cultural environment of the natural regions of the world's largest country. Moriarty.

166 Eastern Asia (3). Spatial structure of population, urbanization, agriculture, industrialization and regional links in China, Japan, and Korea. Spring. Eyre.

167 Tropical Asia (3). Spatial structure of population, urbanization, agriculture, industrialization and regional links in India, Pakistan, Sri Lanka, Bangladesh, and the nations of Southeast Asia. Spring. Eyre, Meade.

168 Africa (3). Primary emphasis on the dynamic spatial organization of Africa south of the Sahara. Individual countries will be studied in view of their geographic characteristics and problems. Fall. Gesler.

171 Cartography (3). Introduction to maps and map-making, stressing drafting and computer techniques, map design, and methods of representing data on maps. One lecture and four laboratory hours a week. Fall. Kopec.

172 Advanced Cartography (3). Prerequisite, Geography 171. Advanced study in map geographics. Application of graphic methods and material for illustrating spatial arrangements and relations of earth phenomena. Spring. Kopec.

173 Spatial Data Representation and Display (3). Introduction to spatial analytical techniques, including computer mapping, remote sensing, and geographic information systems. The emphasis is on approaches for spatial data handling, organizational structures, data representation within an automated environment, manipulation and display of spatial data through use of specialized mapping and graphics computer systems, and the role of such practices in geographic analyses. Spring. Walsh.

175 Medical Cartography (3). Map graphics applied to problems in medical geography. Spatial analyses and planning in epidemiology and health delivery services through map applications are emphasized. Kopec or staff.

176 Advanced Computer Cartography (3). Prerequisite, Geography 173 or equivalent. Advanced topics in computer cartography, including data formats and structures, database design, spatially referenced databases, cartographic/GIS analysis and modeling, spatial interpolation, data aggregation, line generalization, and boundary files. Spring. Walsh or staff.

177 Remote Sensing (3). An introduction to remote sensing of human and physical patterns on the earth's surface from aircraft and spacecraft. Emphasis is on the interpretation of imagery from imaging scanners rather than camera systems. Hawley or Walsh.

178 Interpretation of Aerial Photographs (3). A fundamental review of the uses of aerial photographs in the social sciences. Emphasis is on detecting and identifying man-made objects on the earth's surface from the perspective of space. Two hours of lecture and two hours of laboratory per week. Spring. Hawley.

179 Field Methods and Techniques (3). The philosophy behind field study in geography and various techniques used to solve local sample problems are examined. Emphasis is on development of innovative approaches to problem solutions. Fall. Hawley.

190 Quantitative Methods in Geography (3). Introduction to the application of statistical methods of geographic problems with some computer use in their solution. Attention given to analysis of areal data and areal sampling. Fall. Birdsall or Gesler.

191 Geographic Information Systems *(Planning 136)* (3). Prerequisite, Geography 173 or equivalent. Emphasizes methods of data analysis that offer an automated approach to spatial and non-spatial data synthesis which combines a system of data capture, storage, management, retrieval, analysis, and display. Fall. Walsh.

Department of Geology

Paul D. Fullagar, *Acting Chair*

The department offers two undergraduate degree programs: the B.S. in Geology, and a B.A. degree with Geology as a major. Most students planning to do graduate work or to become professional geologists should take the B.S. program; however, the flexibility of the B.A. program may be advantageous to some with special interests. Students majoring in Geology who are considering Marine Sciences as a graduate specialty should consult the material under "Marine Sciences" in this section of the catalog.

The Geology Department recognizes that some students will want to combine a major in Geology with a concentration in other fields of science, mathematics, or economics. Multidisciplinary curricula of this sort are encouraged, and interested students should discuss a modified set of course requirements with the department's Undergraduate Adviser.

For the B.A. degree with a major in Geology, the student must satisfy the specific requirements of the General College and the College of Arts and Sciences (see General Education curriculum), and must complete these departmental requirements: (1) Introductory Geology (one of the following) - Geology 11 and 11L, 12, 15, or 41, (2) Physics 24 and 24L, 25 and 25L, or 26 and 27, Chemistry 11 and 11L, 21 and 21L, (3) core courses, Geology 52, 53, 56, 57, 58, (4) a minimum of two Geology electives from courses numbered 98 or higher.

For the B.S. in Geology, students must satisfy the General College requirements (Basic Skills and Perspectives). Additional specific requirements are:

English (one of the following) 30, 32, 33, or 34 (33 recommended)

Math 31, 32, plus one of: Math above 32, or Statistics above 23, or

Computer Science (except 4, 96), or Biostatistics 135. Note: Geophysics concentrators should take Math 33 and 124, or another approved course. Students preparing for graduate work in Geology are strongly encouraged to take additional courses in mathematics.

Physics 24, 24L, 25, 25L, or 26 and 27

Chemistry 11, 11L, 21, 21L

Geology:
Introductory Geology: One (Geology majors may receive credit for only one) of the following: 11 and 11L, 12, 15, 41
Core courses: 52, 53, 56, 57, 58
Geology electives: 3 Geology courses numbered 98 or above. (Note: geophysics concentrators should take Geology 142.)
Geology field camp: 128 and 129 or, with permission of departmental adviser, geophysics concentrators may take Physics 52, 58; geochemistry concentrators may take Chemistry 181, 182.

Allied science courses: 5 courses
These courses may be Geology, math, or allied science courses except: Geology 11, 12, 15, 41; Math below 33; Biology 8, 9, 10, 44, 45; Computer Science 4, 96; Physics 18, 19, 20, 21, 36, 37, 38, 39, 41, 45. Certain Geography courses cannot count as allied science electives; those that are allied science electives are Geography 10, 110, 112, 115, 117, 122, 171, 172, 173, 178. With written permission of the departmental adviser, certain courses in the Division of Health Affairs may be taken as allied electives.

The Geology Department encourages qualified undergraduate students to conduct independent research under the direction of a Geology faculty member on an interesting geologic topic. This research can be conducted as a 1 - 4 credit hour project (Geology 199, Special Problems in Geology), or in conjunction with the Geology Honors Program.

The Geology Honors Program is open to undergraduates with an overall grade point average of 3.2 or better as of the beginning of the fall semester of the senior year. To participate in this program, the student chooses a research topic in consultation with his or her chosen faculty sponsor, and conducts the research during the last two semesters in residence. The research project should represent the equivalent time expenditure of six hours of course credit, and is taken as Geology 98 (Fall semester) and Geology 99 (Spring semester).

Minor in Geology

In addition, the Geology Department offers the minor in Geology. Requirements are one of the following courses: Geology 11, 12, 15, 16, 41; and at least three geology courses numbered higher than Geology 41, for a minimum of 12 semester hours.

11 Introductory Geology (3). Geologic materials: minerals and rocks. Major geologic events: earthquakes, volcanic activity, mountain formation, plate tectonics and continental drift. Landscape development by glaciers, streams and groundwater, ocean currents and waves, wind. Not open to students with credit in or currently enrolled in Geology 15. Fall and spring. Staff.

11L Introductory Geology Laboratory (1). Prerequisite or corequisite, Geology 11. Study of common minerals and rocks. Use of topographic and geologic maps to illustrate geologic processes. Two laboratory hours a week. Fall and spring. Staff.

12 The Marine Environment (3). Introduction to natural science emphasizing physical, chemical, biological and geological phenomena in oceanic and coastal environments. Human use of, and impact on, marine resources. (Science majors see MASC 101). Fall and spring. Frankenberg and Martens.

15 The Dynamic Earth (3). Elementary treatment of the earth as a constantly evolving planet. Volcanoes, earthquakes, mountain building, plate tectonics, continental drift and the internal structure of the earth are emphasized. The earth in relationship to other planets is used to understand terrestrial geology and structure. Not open to students with credit in, or currently enrolled in, Geology 11 or 41. Fall. Rial.

16 Evolution of Life (3). Origin and evolution of life as examined from the perspectives of earth history and the fossil record. Spring. Carter.

16L Evolution of Life Laboratory (1). Prerequisite or corequisite, Geology 16 lecture. Collection, identification, and phylogenetic analysis of common animal and plant fossils from North Carolina, including collecting trips to field sites and study at the Smithsonian Institution. Three laboratory hours or one Saturday field trip each week. Spring. Carter. [Natural Science perspective.]

41 Physical Geology for Science Majors (4). Introduction to geology. Geology majors and other science majors. Origin of minerals and rocks. Structure of the earth. Erosion, volcanoes, earthquakes, plate tectonics. Not open to students with credit in or currently enrolled in Geology 11. Three lecture and two laboratory hours a week. Fall and spring. Staff.

42 Historical Geology (3). Geologic history of earth as recorded in rocks. Evolution of continents and oceans. Fossils and the development of life from its ancient beginnings through prehistoric man. Three lecture hours a week, fall. Staff.

42L Historical Geology Laboratory (1). Geologic history of earth. Fossils and the development of life. Two laboratory hours per week, spring. Staff.

43 Mineral Resources (3). Prerequsites, Geology 11, or 15, or 41, or permission of the instructor. A consideration of the distribution, extraction, economics, and demand for mineral resources. Specific topics will include: the impact of the mineral industry on industrial and pre-industrial economies, the unique economic factors associated with the mineral industry, the realities associated with the global maldistribution of energy and metallic resources as well as the problems associated with the depletion of resources, and the environmental impact of the mineral extraction industry. Fall. Feiss.

48 Environmental Geology (3). Prerequisite, Geology 11 or 41, or permission of the instructor. Environmental and human problems connected with uses of earth materials and with geological processes. Mineral resources, land-use planning, and engineering geology. Spring. Rogers.

52 Mineralogy (4). Prerequisites, Chemistry 11 (may be corerequisite), Geology 11 or 41, or permission of the instructor. Principles of mineralogy and crystallography, emphasizing properties and occurrence of the main rock-forming and economic minerals. Methods of identification (including optical mineralogy), crystal chemistry, and environments of formation. Three lecture and three laboratory hours per week. Fall. Fullagar.

53 Igneous and Metamorphic Petrology (4). Prerequisite, Geology 52 or permission of the instructor. Studies of the origin and evolution of igneous and metamorphic rocks, including microscopic, x-ray, and field methods; volcanology; plate-tectonic interpretation of rock sequences. Three lecture and three laboratory hours per week. Spring. Glazner.

56 Sedimentary Rocks and Processes (4). Prerequisites, Geology 11 or permission of the instructor. Study of environments of deposition of sediments and resulting rocks, with an introduction to description, diagenesis, classification and determination of origin of sedimentary rocks with the petrographic microscope. Three lecture and three laboratory hours a week. Fall. Textoris, Paull.

57 Stratigraphy and Paleontology (4). Prerequisites, Geology 56 or permission of the instructor. Principles of measuring time and making correlations in stratified rocks. The principles of paleontology also will be introduced. Examples will illustrate both the resolution and pitfalls of lithologic, biostratigraphic, isotopic, magnetic, and seismic reflection techniques. Three lecture and three laboratory hours a week. Spring. Paull, Carter, Dennison, Textoris.

58 Structural Geology (4). Prerequisites, One of Geology 11, 12, 15, or 41. Introduction to the mechanical behavior and dynamic evolution of the earth's crust through the study of deformed rocks. Includes weekend-long field trip to western North Carolina. Fall. Stewart.

98, 99 Honors Courses (3). For details, see Geology degree requirements. Fall and spring. Staff.

101 Oceanography *(Marine Science 101, Biology 126, Environmental Sciences 127)* (3). Prerequisites, Biology 11, Chemistry 21, Physics 25, or permission of the instructor. An interdisciplinary study of the sea and the interrelationship of marine processes. Three lecture hours per week. Fall and spring. Frankenberg, Neumann.

102 Archaeological Geology *(Anthropology 102)* (3). Prerequisite, permission of the instructor. Application of geological principles and techniques to the solution of archaeological problems. Geological processes and deposits pertinent to archaeological geology and site analysis will be studied. Field trips to three or more sites in this region will be conducted with written reports on geological aspects of the sites required. Not open to Geology graduate students for graduate credit. Fall. Staff.

115 Economic Geology (4). Prerequisites, Geology 53, 56, 57, 58. An introduction to metallic ore deposits. Emphasis is placed on their description, origin, and distribution. Three lecture and two laboratory hours per week. Spring. Feiss.

120 Geomathematics (4). Prerequisite, Math 31 and 32. Introduces geologists to the principles of mathematical physics that are most relevant to the quantification of geological problems. Applications to geology of the differential equations of classical mechanics: Laplace, Poisson, Wave, Diffusion are illustrated through frequent use of computer graphics. Linear and nonlinear systems are discussed in detail. Three lecture and two laboratory hours per week, fall. Rial.

123 Marine Carbonate Environments (4). Prerequisite, permission of instructor. Chemical and biological origins of calcium carbonate, skeletal structure, and chemo-mineralogy, preservation, sedimentation, and early diagenesis are studied in a variety of deep and shallow environmental settings in order to understand skeletal genesis, limestone origin and carbonate facies variability. Field trip to Florida, Bahamas, or Bermuda. Lab exercises; research report. (1992 - 1993 and alternate years.) Spring. Neumann.

123L Marine Carbonate Environments Laboratory (0).

125 Coastal Sedimentary Environments *(Marine Science 125)* (3). Prerequisite, Geology 56. Introduction to modern shallow-water clastic environments and their sediments, emphasizing barrier islands, deltas, estuaries, wetlands, and tidal flats. Includes local field trips and discussion/application of data-collecting techniques. Spring. Wells.

128, 129 Summer Field Courses in Geology (6). Prerequisites, Geology 53, 55, 56, 57, and 58. Six-week field camp conducted in New Mexico, Arizona, Colorado, and Utah. Field interpretation of rocks and their deformation; construction of geologic maps. Includes field trips to classic localities such as Carlsbad Caverns and Arches National Park. First Summer Session only. Staff.

130 Topics in Physical Geology (Var.). A two-week workshop concentrating on an in-depth evaluation of topics typically covered in high school earth science courses. The course will emphasize background material needed for teachers to teach these subjects, materials (audiovisual, readings, lab materials, etc.) available for classroom use, and supplemental demonstrations, labs, and in-class and field exercises that can be used. Depending on teacher interest, some evaluation and design of science fair projects may be addressed. Summer. Staff.

132 Invertebrate Paleontology (Biology 110) (4). Prerequisites, Geology 16 or Biology 11; or permission of the instructor. A survey of the major invertebrate phyla represented in the geologic record, with emphasis on broad skeletal morphology, evolutionary trends, ecology, and biostratigraphic significance. Three lecture and two laboratory hours a week. Fall. Carter.

133 Micropaleontology (4). Prerequisites, Geology 132 or permission of instructor. An in- depth study of the biostratigraphy, paleoecology, and taxonomy of various microfossil groups (i.e., Foraminifera, ostracodes, conodonts, coccoliths, Radiolaria, diatoms, acritarchs, dinoflagellates, etc.) dependent upon individual student objectives. Three lecture and three laboratory hours a week. Spring. Bralower.

137 Coastal Plain Stratigraphy and Biostratigraphy (4). Prerequisites, Geology 11 or 16 and one of Geology 42, 57, 132, or permission of the instructor. A field-oriented course on the Triassic through recent strata of the southeastern United States, including their geological framework and their litho- and biostratigraphic classification. (1992 - 1993 and alternate years). Fall. Carter.

138 Geomorphology (3). Prerequisites, Geology 11 or 41. The origin of landforms. Includes those formed by weathering, mass wasting, streams, dissolution of limestone, coastal processes, glaciation, and wind. Fall. Dennison.

138L Geomorphology Laboratory (1). Prerequisite or corequisite, Geology 138. Two laboratory hours per week. Fall. Dennison.

139 River Systems of East Coast North America (3). Prerequisite, Geology 11 or 41; Geology 42, 46, 48, or 138; at least junior status. Analysis of 23 rivers from St. Lawrence to the Everglades, from headwaters to oceanic terminus of turbidite fan. Focus on stream processes, geologic development, hydrology, utilization history, ecology, and planning. Spring. Dennison.

142 Geophysics (3). Prerequisites, Physics 24, 25. Elementary seismic, gravity, geomagnetism, and telluric currents; seismic gravity, magnetic, electrical, and radioactivity prospecting and instrumentation. Fall. Powell.

142L Geophysics Laboratory (1). Prerequisite or corequisite, Geology 142. Three laboratory hours per week. Fall. Powell.

145 Geochemistry *(Marine Sciences 145)* (3). Prerequisites, Geology 11, 15, or 41, Chemistry 21, or permission of the instructor. Introduction to the application of chemical principles to geological problems, with emphasis on isotopic methods. Spring (1992 - 1993 and alternate years). Benninger.

146 Physical Geochemistry (4). Prerequisites, Chemistry 21, Mathematics 32, or permission of the instructor. An introduction to physical geochemistry and chemical thermodynamics with special emphasis upon geological applications. Three lecture and three laboratory hours per week. Fall (1992 - 1993 and alternate years). Benninger.

151 Geodynamics (3). Prerequisites, Geology 11 or 41, Mathematics 32, Physics 24, 25, Chemistry 21. Interior of the earth deduced from seismology, gravity, heat flow, magnetism; geophysics of continents and ocean basins; age of earth. Spring. Rogers.

152 Plate Tectonics (3). Prerequisites, Geology 11 or 41, Physics 24, 25, and Mathematics 32. Kinematic and dynamic analysis of plate tectonics. Geology of plate boundaries; plate reconstructions; relative and absolute plate motions; stability of triple junctions; driving mechanisms. (1992 - 1993 and alternate years.) Spring. Powell.

157 Problems in Vertebrate Evolution *(Biology 157)* (3). Prerequisites, Biology 63, or permission of the instructor. A study of the major transitions in vertebrate evolution and associated problems in evolutionary biology, structural change, paleoecology, biogeography and earth history, physiology and behavior. Three lecture hours a week. Fall. Feduccia.

162 Energy Resources (3). Prerequisites, Geology 11 or 41, 42, or 135. Geology of oil, natural gas, uranium, hydropower, and geothermal energy. (1991 - 1992 and alternate years.) Spring. Dennison.

162L Energy Resources Laboratory (1). Prerequisites, Geology 162 (may be corequisite). Laboratory problems and field trips related to Geology 162. Three laboratory hours per week. (1991 - 1992 and alternate years.) Spring. Dennison.

163 Applied Hydrology (3). Prerequisites, Geology 11 or 41; Math 31; Phys 25; or permission of instructor. An introduction to methodologies and instrumentation for quantifying the movement of water in the earth system focusing on components of the hydrologic cycle. Emphasis will be divided between analytical aspects and field procedures. Spring. Daniel.

164 Geochemistry of Natural Waters (3). Prerequisites, Geology 11, 15, or 41; Chemistry 21; Math 31; or permission of the instructor. Survey of processes affecting the compositions of streams, lakes, the ocean, and shallow groundwaters. Spring (1991 - 1992 and alternate years). Benninger.

165 Groundwater (3). Prerequisites, Geology 11, 15, or 41; Chemistry 21; Math 31; Physics 24, 25; or permission of the instructor. Introduction to physics, chemistry, and geology of groundwater. Fall. (1991 - 1992 and alternate years). Benninger.

169 Physiography of the Eastern United States (Geography 122) (3). Prerequisites, Geology 11, Geology 138, or permission of the instructor. Natural science credit. Spring.

173 Topics in Petrology (4). Prerequisites, Geology 53. Origin of magmas and evolution of igneous and metamorphic rocks, combined with petrographic study of selected suites and individual examples. Two lecture and six laboratory hours per week. Spring.

181 Fluid Dynamics *(Marine Science 151, Physics 151)* (3). Prerequisites, Physics 103 or permission of the instructor. The physical properties of fluids, kinematics, governing equations, viscous incompressible flow, vorticity dynamics, boundary layers, irrotational incompressible flow. Three lecture hours a week. Fall. Bane.

188 Geological Oceanography *(Marine Science 103)* (4). Prerequisites, Geology 11 or 41, 42. The origin and bathymetry of ocean basins, the nature and history of deep-sea sedimentation, the structure and sediments of continental margins, and the dynamic geomorphology of the coastal zone. Field trip to Outer Banks. Three lecture and three laboratory hours per week. Fall. Neumann.

197 Paleobotany *(Botany 181)* (5). Prerequisites, Biology 11, 21 - 21L, or permission of the instructor. An introduction to the morphology, stratigraphic occurrence, and evolutionary relationships of fossil plants. Both macrofossils and microfossils will be considered. Two lecture and six laboratory hours per week. Fall. (1992 - 1993 and alternate years.) Gensel.

199 Special Problems in Geology (1 - 4). Registration requires approval of the departmental chairman. For details, see discussion of Geology degree requirements. Fall and spring. Staff.

Department of Germanic Languages

Siegfried Mews, *Chair*

The Department seeks to offer courses tailored to the needs of several different groups of students. While many courses are designed to provide a rich program for German majors (including numerous double majors), others are suitable for students seeking a more modest level of involvement in the language, literature, and culture of German-speaking Europe. Still other courses are designed for those students who cannot take the time to learn German as a prerequisite; these courses are conducted in English, with translated texts. A further group of courses gives the student an introduction into Afrikaans, Dutch, or Norwegian language and literature.

Most students enter UNC-Chapel Hill German courses with no prior experience in the language, but those who have had previous exposure are placed according to their skills. Upon completion of fourth-semester German quite a number of students take further courses simply to improve their skills or to learn more about German language, literature, and culture; many others decide at this point to major in German, for which purpose they consult the departmental majors adviser. It is quite common for students

to "double major," combining German with another field appropriate to their needs; in such a case students should consult advisers both in the German Department and in the other department concerned.

The German major requires eight courses beyond German 4: German 21, 31 (may be taken concurrently with 21), 32, 68 (171 may be taken instead), and four courses on the 70 - 80 - 90 level (or, with permission, on the 100 level). German majors qualified for honors work may arrange with the departmental honors adviser to take German 98 (which counts as one of the eight courses for the major), followed by German 99 (writing of honors thesis), which counts as a German elective credit. Only one course conducted in English counts towards the major.

Students seeking certification to teach in public schools should consult advisers in the School of Education.

The Department also offers a German Studies track leading to the B.A. in German. The track consists of four courses taken in the Department (German 21 and 31; two literature courses taught in German from the 70 - 80 - 90 and/or 100 level), one course each taken in the departments of History and Political Science, two courses offered by other departments in the Humanities and Social Sciences, and an interdisciplinary seminar (German 90).

All students interested in further study of German may obtain *A Guide to Undergraduates Studies* from the Department.

Minor in Germanic Languages

The undergraduate minor in German consists of four German courses beyond German 4;

Two required courses:

GERM 21	Introduction to German Literature
GERM 31	Conversation and Composition
	and two courses above GERM 31 taught in German.

Students wishing to pursue a minor in German should have grades at B level or higher in German 3 and 4.

Other Opportunities

The Department offers advice on foreign study and job opportunities and encourages students to participate in the UNC Year in Tübingen, Göttingen, or Berlin. Prospective majors should consider applying for residence in the German House, a German-speaking section of a coed dormitory. Numerous social and educational events provide an atmosphere for effective learning and for enjoyment of cultural aspects of German life. Students anticipating further study in the Business program, Law School, Medical School, and other professional programs are encouraged to study German both for humanistic values and as practical preparation for more flexible career options in the increasingly international community of professionals.

Undergraduate Courses

Language Courses

1 Elementary German (4). Fall and spring. Staff.

2 Elementary German (4). Fall and spring. Staff.

1A Elementary German (4). Honors. Fall. Staff.

2A Elementary German (4). Honors. Spring. Staff.

3 Intermediate German (3). Intensive reading and review of grammar; discussion in German. Fall and spring. Staff.

3A Intermediate German (3). Honors. Fall. Staff.

4 Intermediate German (3). Reading of selected texts with discussion in German. Fall and spring. Staff.

4A Intermediate German (3). Honors. Spring. Staff.

31 Conversation and Composition (3). Prerequisite, German 4 or permission of instructor. Emphasis is on speaking, with shorter readings on contemporary German life to provide subject matter for in-class discussion and regular written compositions. Further goals include improvement of pronunciation and a mastery of grammar. Fall and spring. Staff.

32 Advanced Conversation and Composition (3). Prerequisite, German 31 or permission of instructor. Continues the goals of German 31, but with added emphasis on stylistic improvement in speaking and writing. Fall and spring. Staff.

Literature Courses in German

21 Introduction to German Literature (3). Prerequisite, German 4 or equivalent. Presents major authors (such as Goethe, Mann, Kafka, and Brecht), genres, and textual analysis. An appropriate conclusion to German 1 - 4, it also provides the background for more advanced undergraduate literature courses. Discussion and essays in German. Fall and spring. Staff.

68 German Culture (3). Prerequisites, German 21 or 31, or permission of instructor. Major trends in intellectual, artistic, musical, and political life in the German-speaking countries, ca. 1500 - 1980. Lectures in German, readings in German and English. Fall or spring. Tax.

70 The Age of Goethe (3). Prerequisites, German 21 and 31, or permission of instructor. German literature from the Enlightenment to Romanticism. Readings include works by Lessing, Goethe, Schiller, Kleist, and the Romantics. Fall or spring. Schweitzer, Kuzniar.

71 Modern German Literature (3). Prerequisites, German 21 and 31, or permission of instructor. German literature from 1890 to the present. Study of masterpieces by authors such as Thomas Mann, Kafka, Brecht, Hesse, and Grass. Fall or spring. Staff.

72 German Literature in East and West (3). Prerequisites, German 21 and 32, or permission of instructor. An examination and comparison of writings published in the two Germanies since 1945. Readings of works by Böll, Grass, Wolf, Becker, Fühmann, and others. Fall or spring. Pike.

73 Die Jahrhundertwende (3). Prerequisites, German 21 and 31, or permission of instructor. Investigation of the interconnectedness of turn-of-the-century arts, philosophy, and psychoanalysis with focus on Berlin and Vienna. Works by Nietzsche, Hauptmann, Schnitzler, Freud, Hesse, Hofmannsthal/Strauss, Kafka, Rilke, Th. Mann. Fall or spring. Kuzniar.

80 The German Novella (3). Prerequisites, German 21 and 31, or permission of instructor. The development of the genre from Romanticism to the present. Reading of the novellas by such authors as Kleist, Brentano, Meyer, Keller and Kafka. Fall or spring. Staff.

81 German Drama (3). Prerequisites, German 21 and 31, or permission of instructor. German drama from the late Enlightenment to the present. Readings include plays by dramatists such as Goethe, Schiller, Kleist, Hauptmann, Brecht, and Dürrenmatt. Fall or spring. Staff.

82 German Lyric (3). Prerequisites, German 21 and 31, or permission of instructor. Survey of German poetry according to major poets, forms, and literary movements. Fall or spring. Scott.

95 Studies in German Literature (3). Prerequisites, German 21 and 31, or permission of instructor. Study of a literary genre, theme, writer, period, movement, or problem. Fall or spring. Staff.

98, 99 Honors Course (3 each). Reading and special studies under the direction of department advisers. For majors only. Fall and spring. Staff.

Courses in English Translation
(No German Required)

40 Great Works of German Literature in Translation (3). A study of masterpieces from medieval romances (Parzival, Tristan, Nibelungenlied), the era of Goethe and Schiller, and the modern period (Mann, Kafka, Hesse, Brecht). Fall or spring. Staff.

41 Twentieth-Century German Literature in Translation (3). Modern German literature in relation to its social, political, and aesthetic background. Study of masterpieces of authors such as Thomas Mann, Hesse, Kafka, and Grass. Fall or spring. Staff.

44 Women in German Cinema *(WMST 44)* (3). Introduction to feminist aesthetics and film theory by the examination of the representation of women in German cinema from Expressionism to the present. All films subtitled. Language of instruction: English. Fall. Kuzniar. (B.A. level Aesthetic/Literature perspective.)

46 Studies in German Literature (3). Study of literary genre, theme, writer, period, movement, or problem. Fall or spring. Staff.

94A Ideology and Aesthetics: Marxism and Literature *(Slavic 94A)* (3). Examination of clash between 20th-century writers and the state in countries where a single political government or party uses an exclusive ideology as justification for interference in cultural and literary affairs. Fall or spring. Pike.

94B South Africa in Literary Perspective (3). Prerequisite, permission of instructor. Course aims at an understanding of the South African experience as it is represented by that country's important writers. Readings include works by Gordimer, Coetzee, Mphahlele, Breytenbach, Fugard, Ndebele, Paton, la Guma. Fall or spring. Roberge.

Methods in Teaching K - 12 German

83 Materials and Methods in K - 12 German *(Education 83g).* (6). Prerequisite, senior status. Fall. Heining-Boynton.

84 Directed Teaching of K - 12 German *(Education 84g).* (12). Prerequisite, German 83. Spring. Heining-Boynton.

German Studies

90 Contemporary German Studies: An Interdisciplinary Seminar *(History 93, Political Science 51)* (3). Prerequisites, German 1 - 4, or permission of instructors. The interdisciplinary, team-taught seminar will explore cultural, historical, and political problems of contemporary Germany (FRG and GDR) and analyze German developments from the postwar period to the present. Mews, Jarausch, Kurthen.

Courses for Undergraduate and Graduate Students

German Language, Literature, and Civilization

100 Advanced German Grammar (3). Prerequisites, German 21, 31, 32, or equivalent. Form and content, difficulties, and peculiarities, from a structural and historical point of view. Fall. Tax.

101B Intensive German (5). Prerequisite, permission of instructor. An accelerated, intensive course that essentially covers materials of German 1 and 2 in one semester, but serves specifically as a preparatory course for German 102B (Business German). Fall.

102B Business German (3). Prerequisite, German 1 and 2 or German 101B, permission of instructor. General study of German politics, history, economics, and culture, combined with acquisition of advanced, business-related language skills. Spring.

103 Stylistics: Theory and Practice (3). Prerequisites, German 21, 31, and 100, or equivalent and permission of instructor. A *rigorosum* in advanced and oral and written composition. Spring. Bister.

109 German Fiction in the Nineteenth Century (3). Prerequisites, German 21 and 31, or equivalent. Study of the major prose writers of the nineteenth century. Readings, lectures, and reports. Fall or spring. Mews.

110 The Structure of Modern German (3). Prerequisite, proficiency in German. Introduction to formal analysis of German grammar (phonology, morphophonemics, prosodics, morphology, syntax) within the framework of generative grammar. Roberge.

111 German Drama in the Nineteenth Century (3). Prerequisites, German 21 and 31, or equivalent. Kleist, Grabbe, Büchner, Grillparzer, Hebbel, Raimund, Nestroy, among others. Readings, lectures, and reports. Fall or spring. Mews.

115 The German Lyric from Hölderlin to the Present (3). Prerequisites, German 21 and 31, or equivalent. An analysis of the chief lyric poets, movements, and types of the past two hundred years. Fall or spring. Mews, Scott.

121 Goethe's Poetry and Faust (3). Prerequisites, German 21 and 31, or equivalent. Close analysis of poems selected from all phases of Goethe's life and of the two parts of Faust. Fall or spring. Schweitzer.

125 Special Topics in German Studies (3). Study of literature or language on an announced theme, with subject matter, perspective, or combination of approaches not available in the regular offerings of the department. Readings in German. Fall or spring. Staff.

131 German Literature of the Eighteenth Century (3). Prerequisites, German 21 and 31, or equivalent. From the Enlightenment to Sturm und Drang. Fall or spring. Schweitzer.

139 German Romanticism (3). Prerequisites, German 21 and 31, or equivalent. Theoretical background and realization in poetry, prose, and drama. Fall or spring. Schweitzer, Kuzniar.

141 Schiller (3). Prerequisites, German 21 and 31, or equivalent. Discussion of the plays, representative poems, and select essays against the intellectual background of Schiller's and our times. Schweitzer.

152 German Novel from 1890 to 1945 (3). Prerequisites, German 21 and 31, or equivalent. A survey of German, Austrian, and Swiss novelists from 1890 to 1945, including writers such as Schnitzler, Thomas Mann, Heinrich Mann, Hesse, Kafka, Musil, and Broch. Mews.

153 German Drama from 1890 to 1945 (3). Prerequisites, German 21 and 31, or equivalent. A comprehensive study of German, Swiss, and Austrian drama from Naturalism to the end of World War II. Mews.

154 Drama and Prose Fiction in Austria, West Germany, and Switzerland Since 1945 (3). Prerequisites, German 21 and 31, or equivalent. Reading and discussion of works by such authors as Böll, Grass, S. Lenz, Handke, Frisch, Dürrenmatt, Hochhuth, and Weiss. Mews.

155 Goethe (3). Prerequisites, German 21 and 31, or equivalent. The poet within the Western tradition. Study of his masterpieces, including the poetry, Werther, Wilhelm Meister's Apprenticeship, and Faust. Fall or spring. Schweitzer.

156 Literature and Society in East Germany (3). Prerequisites, German 21 and 31, or equivalent. Study of the development of literature in East Germany from 1945 to the present in its political and social context. Selection of works by Seghers, Fühmann, Heym, Wolf, Becker, Loest, and others. Pike.

161 History of the German Language (3). Development of sounds and forms from ancient times to present. Political, social and literary forces influencing the language. Prerequisite, a good reading knowledge of German. Fall. Smith, Roberge.

170 General Introduction to German Volkskunde *(Folklore 170)* (3). Prerequisite, a reading knowledge of German. On demand. Tax.

171 German Civilization (3). Major trends in intellectual, artistic, and political life from early times to the present. Fall or spring. Tax.

172 Linguistic Hybridization *(Linguistics 172, Anthropology 192)* (3). Investigation of pidginization, creolization, settlers' dialects, and interlanguage. Case studies from Afrikaans, Virgin Islands Dutch Creole, Pidgin German, Yiddish, Foreign Workers' German, Tok Pisin. Roberge.

191A Teaching Methods and Materials (2). For prospective teachers of German. Required of all teaching assistants. Fall. Bister.

191B Teaching Methods and Materials (2). Prerequisite, German 191A. For prospective teachers of German. Required of all teaching assistants. Spring. Bister.

192 Brecht's World of the Theatre (3). (See Comparative Literature 192). Fall or spring. Mews.

Dutch

105 Elementary Dutch (3). Prerequisite, reading knowledge of German or permission of the instructor. Rapid introduction to modern Netherlandic with emphasis on both speaking and reading. Fall. Francke, Tax. (Alternate years.)

106 Intermediate Dutch (3). Prerequisite, Dutch 105 or equivalent. Reading of modern Dutch literature with discussions in Dutch. Spring. Francke, Tax. (Alternate years.)

158 The Golden Age of Dutch Literature *(Renaissance and Baroque)* (3). Prerequisite, Dutch 105 or equivalent, or permission of the instructor. Masterpieces of Dutch literature of Renaissance and mainly Baroque; literary relations with German and other literatures will be stressed. Spring. Francke, Tax. (On demand.)

Scandinavian

181 Elementary Norwegian (3). Rapid introduction to modern Norwegian (bokmaal) with attention to both speaking and reading. Fall. Smith.

182 Intermediate Norwegian (3). Prerequisite, German 181 or equivalent. Speaking and reading of Norwegian, with focus on 20th-century literature. Brief introduction to Nynorsk, Danish, and Swedish. Spring. Smith.

187 Introduction to Modern Scandinavian Literature (3). An introduction to nineteenth- century and twentieth-century Scandinavian literature (in translation) with particular reference to the work of Ibsen and Strindberg, and modern fiction. Spring. Bergholz.

Department of History

Richard A. Soloway, *Chair*

The study of history is an essential part of a liberal arts education and offers valuable preparation for many careers: in law, journalism, libraries, and museums; in local, state, and national public service; in business; in international work; and, of course, in historical research and teaching. More broadly, by an exposure to a variety of cultures and human experience and by training in the interpretation of conflicting evidence, the department of history seeks to prepare a person for the responsibilities of citizenship and for dealing with the ambiguities of human existence.

Diversity in the program of the history major encourages a comparative approach to human problems and discourages parochialism; specialization in the program promotes an appreciation of the complexity of human affairs and the difficulties involved in interpreting them. Finally, the discipline of history stimulates imagination and analytical thinking.

Requirements for the Major

Students must complete the following requirements for a major. Each major shall concentrate in one area (American, Ancient/Medieval, Modern European, or Non-Western/Third World) or devise a thematic concentration and have it approved by the Chair of the Undergraduate Studies Committee.

A history major consists of ten history courses. These can include two history courses used to fulfill the historical perspective of the General College. A minimum of four and a maximum of six courses of these ten courses will fall in the student's field of concentration. A minimum of four and a maximum of six courses will be outside of the student's field of concentration. All majors will take at least one history department course in Non-Western/Third World history. A minimum of six of the courses that a student takes for the major must be numbered "50" or above. Each major will take a History 90 seminar (Topics in History).

Of these ten courses, at least seven must be completed with a grade of C or higher. No history course may be taken for Pass-Fail credit (even if the course serves as a free elective). A maximum of thirteen history courses (40 hours) may be applied towards the B.A. degree. Any courses beyond the minimal ten (but not above the maximum of thirteen) will count as Free Electives.

In addition to the major requirements, history majors also must complete General Education requirements regarding B.A. level Perspectives. These courses may not be taken pass/fail. Students taking a major in history may not use a history department course to fulfill a perspective at the B.A. level unless the course is a capstone course.

NOTE: Courses in Directed Teaching of the Social Sciences and in Materials and Methods of Teaching the Social Sciences will be found under the School of Education.

History Honors

The departmental honors program is open to any qualified history major with at least a 3.2 average and experience in research and writing derived from a History 90. The student pursuing a degree in History with Honors must take History 98A and 98B The student, in consultation with the honors director, will choose a topic and locate an appropriate faculty member to supervise the essay. In 98A the mechanics of researching and writing a senior essay will be discussed, and a start made on the essay itself. In 98B the essay will be completed, and the student examined by the supervisor and at least one additional faculty member to be agreed upon by the student and supervisor. To receive highest honors the essay must be recommended by the examiners and a review committee. The director of honors, in consultation with the examiners and review committee, will recommend that the student who has defended the essay be graduated with either honors or highest honors, or merely with course credit.

Applicants for the history honors program should contact the Director of Honors in the Department of History.

The Minor in History

The minor in history consists of five courses taken in the Department of History. A maximum of two courses can be below 50; no more than one course can be used to fulfill perspective requirements for General College. Students must have a grade of C or better in at least four of the five courses; three must be taken at UNC-Chapel Hill or a program officially sponsored by the University. Students taking a minor in history may not use a history department course to fulfill a B.A. level perspective unless the course is a capstone course.

4H Honors in Third World History (3). This course will focus on problems dealing with the historical formation of non-Western, developing societies generally referred to as the Third World. Specific themes and geographic region will vary from year to year. As announced. Staff.

5H Honors in Western Civilization to 1650 (3). An examination and analysis of major themes and topics in the political, social, intellectual, cultural, and economic history of the west from ancient times to the 17th century. Fall. Staff.

6H Honors in Western Civilization Since 1650 (3). An examination and analysis of major themes and topics in political, social, and intellectual, cultural, and economic history of the west from the 17th century to the present. Spring. Staff.

7H Honors in American History to 1865 (3). An exploration and analysis of major themes and events in the political, economic, cultural, social, and intellectual history of the United States from its founding to the Civil War. Fall. Staff.

8H Honors in American History Since 1865 (3). An exploration and analysis of major themes and events in the political, economic, cultural, social, and intellectual history of the United States from the Civil War to the present. Spring. Staff.

11 History of Western Civilization to 1650 (3). The emergence of western civilization from Greek antiquity to the mid-seventeenth century. Fall and spring. Staff.

12 History of Western Civilization Since 1650 (3). The development of western civilization from the middle of the seventeenth century to the present. Fall and spring. Staff.

14 Ancient History (3). A topical survey of the ancient world, especially the civilization of the Near East, Greece, and Rome. Fall. McCoy.

15 Medieval History (3). A survey of western Europe and the Mediterranean World, 300 - 1500. Spring. Behrends.

16 Modern European History, 1500 - 1815 (3). Intellectual and social structures, dynamics of social and political change, principles of authority and bases of revolution from the Reformation to the French Revolutionary and Napoleonic period. Fall. Staff.

17 Modern European History Since 1815 (3). The reactions of European society to the problems created by industrialization, nationalism, revolutionary movements, the world wars, and the decline of Europe. Spring. Staff.

18 The Contemporary World in Historical Perspective: The World Since 1945 (3). Analyzes the Cold War, the challenge of decolonization, America's role in international politics, the world as an economic and political unit, the multipolar diplomacy of the 1970s. Fall and spring. Fletcher, Hunt, Raleigh, Reid, Weinberg, staff.

21 American History to 1865 (3). A survey of various aspects of American development during the colonial, revolutionary, and national periods, with stress upon major themes and interpretations. Fall and spring. Staff.

22 American History Since 1865 (3). A survey of various aspects of American development during a century of rapid industrial, social, political, and international change, with stress upon major themes and interpretations. Fall and spring. Staff.

24 Latin America Under Colonial Rule (3). Social and economic development under Colonial rule, especially in Mexico and Peru. Fall. Chambers, Joseph.

25 Latin American Since Independence (3). A general introduction to Latin American society, culture, politics, and economics from a historical perspective. Focus will be on the events of the past two centuries. Spring. Chasteen.

27 English History to 1688 (3). Prehistoric and Roman Britain; Dark Age and Medieval England; Reformation, founding of the Colonies, revolutions scientific and political. An introductory survey for freshmen and sophomores. Fall. Staff.

28 English History Since 1688 (3). A general survey emphasizing the social, economic, political, and intellectual development of modern English society. Spring. Soloway.

30 Russian History to 1861 (3). The major themes of this survey are: the development of the unified, centralized state, the growth of serfdom, and the origins of the Russian revolutionary movement. Fall. Griffiths, Brooks.

31 History of Russia from 1861 to the Present (3). This survey of modern Russia analyzes the abolition of serfdom, the Russian revolutions, continuity and change, the pre- and postrevolutionary periods, and the relationship between Russia and the West in the last century. Spring. Brooks, Griffiths.

33 Traditional East Asia (3). Comparative and interdisciplinary introduction to the major political, social, and cultural traditions of China and Japan before their societies were disrupted in the nineteenth century by Western intrusion. Fall. Kessler, Fletcher.

34 Modern East Asia (3). Comparative and interdisciplinary introduction to China and Japan in the nineteenth and twentieth centuries, focusing on impact of the West, nation-building, industrialization, and evolution of mass society. Spring. Fletcher, Kessler.

36 Introduction to Islamic Civilization *(Religious Studies 25)* (3). A broad, comprehensive, and interdisciplinary introduction to the traditional civilization of the Muslim world. Fall. Bodman.

37 Later Islamic Civilization and the Modern Muslim World *(Religious Studies 26)* (3). A broad interdisciplinary survey of the later Islamic empires since the fifteenth century and their successor societies in the modern Muslim world. Spring. Bodman.

38 History of Africa I (3). A survey of the history of African civilizations up to the mid- nineteenth century. Stress on political and economic innovation of African societies prior to the Colonial period. Fall. Newbury.

39 History of Africa II (3). The resistance to conquest, impact of colonial policies on social and economic processes in African societies and the growth of nationalism prior to independence. Spring. Newbury.

41 History of Africans in the Americans through Emancipation (3). A survey of the pre-emancipation history of the peoples of African descent in Latin America and the Carribean with some attention to developments in North America. Fall. Palmer.

42 History of Africans in the Americas since Emancipation (3). A survey of the history of blacks since the end of slavery in Latin America and the Carribean with some attention to developments in North America. Spring. Palmer.

51 History of the Ancient Near East (3). From Prehistory through the Persian Empire; chronological framework, with emphasis on economic, social, religious, and other cultural matters. Fall. Staff.

52 History of Greece (3). A survey of Greek history and culture from the Bronze Age to the Hellenistic period. Spring. McCoy.

53 History of Rome (3). Origins to the first two centuries A.D. Focuses upon Rome's growth as a world power and the shift from republican government to autocracy. Fall or spring. Talbert.

54 Cathedral and Castle in Medieval England (3). An approach to the middle ages through the architectural masterpieces of medieval England. Fall. (Alternate years.) Pfaff.

56 Manor to Machine: The Economic Shaping of Europe (3). From agriculture to industry, Europe's march to industrialization. Survey from the medieval manor through revival of trade, rise of towns, credit and capitalism, overseas expansion and mercantilism to the Industrial Revolution. Spring. Bullard.

57 Seventeenth Century Age of Genius: Western Man at the Watershed (3). Examining European thought in the seventeenth century, the course considers such problems as authority vs. free inquiry; scepticism vs. dogmatism; toleration; the religious self; political community; Biblical criticism. Spring. Headley.

58 Women in Europe Before 1750 *(Women's Studies 58)* (3). The female experience in preindustrial Europe (from Ancient Greece to the Industrial Revolution). Fall. (Alternate years.) J. Bennett, Harris.

59 Women in Europe Since 1750 *(Women's Studies 59)* (3). The impact of industrialization on woman's work, her position in the family, her role and social status during the 19th and 20th centuries. Spring. (Alternate years.) J. Bennett, Harris.

60 Eastern Europe Since 1815 (3). A study in the emergence of nations of Eastern Europe, their internal development, mutual conflicts, and struggle for independence. Fall. Anderle.

61 Women in Russian and Soviet History, 1860 - Present (3). This course traces the development of the woman question in tsarist Russia, how the Soviet regime affected women's lives, and how women's experiences compare to the Party's claim of equality. Spring, summer. Raleigh, staff.

62 Women in American History *(Women's Studies 62)* (3). Women's roles and contributions from the colonial period to the present. Themes include the family and sexuality, the impact of industrialization, reform movements, and difference of race, class, and region. Fall or spring. Hall.

*Graduate students can participate in History 66 or History 67 by first consulting with the instructor and then enrolling in History 299.

63 History of Sea Power *(Peace, War, and Defense 63)* (3). The influence of seapower on international affairs will be surveyed from ancient times to the present. Emphasis on U.S. Naval History and its interaction with diplomacy, economics, and technology. Fall or spring. Staff.

64 History of American Business (3). A survey of the rise and development of the major financial, commercial, manufacturing, and transportation enterprises which transformed the United States from an agricultural into a leading industrial nation. Spring. Coclanis.

65 The Worker and American Life (3). From the experience of colonial artisans to contemporary factory and office workers, organized and unorganized, this course examines the effect of the industrial revolution on the American social and political landscape. Spring. Fink.

***66 North Carolina History Before 1865** (3). The history of North Carolina from the original Indian cultures to the end of the Civil War. Important topics include colonization, the American Revolution, evangelical religion, slavery, economic and political reform, the rise of sectionalism, and the Civil War. Fall. Leloudis, Watson.

***67 North Carolina History Since 1865** (3). The history of North Carolina from the end of the Civil War to the present. Important topics include Reconstruction, agrarian protests, disfranchisement and segregation, industrialization and workers' experience, the civil rights movement, and twentieth- century politics. Spring. Leloudis, Watson.

68 Military History of the United States to 1903 *(PWAD 76)* (3). The American military experience from colonial times to the early 20th century. Major themes include the problem of security, the development of military policies and institutions, and the way in which the country waged and experienced war. Fall. Kohn.

69 Military History of the United States from 1903 to Present *(PWAD 77)* (3). Survey of America's military experience in the 20th century, focusing on national security policy, military institutions, World Wars I and II, the Cold War, the Korean and Vietnam Wars, and recent interventions. Spring. Kohn.

71 The Vietnam War and American Society, 1940 - 1975 *(PWAD 118)* (3). A study of the origins and course of American involvement in Vietnam including the strategy, technology, and effect of the war on American Society, 1940 - 1975. Fall.

72A History of Native Americans (3). A survey of Native American cultures of North America from the earliest times to the present with a focus on the period after 1500. Fall, spring. 72B History of Native Americans in the Southeast (3). An examination of selected topics concerning the most significant Native American cultures and tribes in the Southeastern United States from the earliest times to the present. Fall, spring.

73 The Urban World in the Twentieth Century: A Comparative Perspective (3). A comparative survey of twentieth-century cities, stressing the process of urbanization and the role of the city in history. Fall. Lotchin.

74 The American West, 1800 to the Present (3). A survey and interpretation of the American West in the 19th and 20th centuries, emphasizing the special role of the West in the evolution of American history and the development of contemporary American society. Fall. Lotchin.

75 American History 1865 to the Present (3). Prerequisite, juniors and seniors only. A survey of those major political, social, and economic problems and developments from Reconstruction onwards essential to an understanding of the shaping of the American nation. (Credit for History 75 is not allowed if credit has been received for either History 8H or History 22.) Fall and spring. Staff.

77 The Middle East in the Modern Era (3). A political, economic, social, and cultural history of the Middle East in the nineteenth and twentieth centuries. Fall. Bodman.

78 The Trans-Atlantic Slave Trade (3). Slavery in select African communities, economic and political foundations of the trans-Atlantic slave trade, and its impact on African and New World societies. Fall. H. Bennett, Newbury.

80 Women and Gender in Latin American History *(WMST 80)* (3). Examines the experiences of women and gender relations in Latin American societies from pre-Columbian times to the present, providing a new perspective on the region's historical development. Spring. Chambers. (B.A. level Non-Western perspective.)

79 History of South Africa (3). Historical development of a plural society from 1600 to the present. with attention to various traditions of historiography which have developed concerning South African history. Spring. Newbury.

81 Revolutionary Change in Latin America (3). Comparative approach to the question of continuity and social change. Case studies include: Mexico, Cuba under Castro, Chile under Allende, and Central America. Emphasis given to the quest for economic development and political stability, and to revolutionary ideologies. Spring. (Alternate years.) Joseph.

82 An Introduction to the Society and Culture of Latin America: History, Literature, and Cinema *(Lat. Amer. Studies 79)* (4). An introduction to the society and culture of Latin America through history, literature, and film. Fall. Chasteen.

83 Origins of the Chinese Revolution (3). The struggle for revolutionary change in China from the turn of the century to the establishment of the People's Republic in 1949. Fall. Kessler.

84 Revolutionary Change in Contemporary China (3). Political and economic reconstruction in China since 1949, the transition to a post-Mao order, and life and society in China today. Spring. Kessler.

86 Thought and Society in Japan (3). Topical approach to the intellectual and social history of Japan. Topics include: the role of the family and women, keys to economic growth, development of antimodernism, search for Japanese values. Spring. Fletcher.

87 Imperial Japan: From "Revolution to World War" (3). This course studies Japanese feudalism, the Meiji "revolution," modernization, the formation of Japan's empire, the beginnings of Japanese democracy, and the coming of the Pacific War. Fall. Fletcher.

88 Japan Since 1945: The Fragile Superpower (3). Examines Japan's recovery from defeat in World War II to rise again as a major power. Topics include: the American occupation, Japanese democracy, economic recovery, changes in social values, and foreign relations. Spring. Fletcher.

89 Peace and War *(Peace, War, and Defense 78)* (3). The emphasis will be historical, with conceptual tools from other disciplines used when appropriate. Theoretical explanations, militarism, the international system, internal order, and the search for peace will be examined. Spring. Brooks.

90 Topics in History (3). The subject matter of the courses will vary with the instructor and topic. Each course will concern itself with a study in depth of some problem in history. Permission must be received from the Undergraduate Secretary in HM 556 to register for the course, and the course is in general limited to 15 students. Both semesters. Staff.

91 Independent Studies in History (3). Permission required. For the history major who wishes to create and pursue an historical project under supervision of selected instructor. Course is limited to 3 credit hours per semester. Fall and spring. Staff.

92A The Culture of the Ancient Near East *(Religious Studies 20)* (3). Fall. Sasson.

92B The History of Religion in America *(Religious Studies 29)* (3). Spring. Wacker.

92C History and Culture of Ancient Israel *(Religious Studies 56)* (3). Spring. Van Seters.

92D Religion in Colonial Society *(Religion 71)* (3). Spring. Wacker.

93 Contemporary German Studies: An Interdisciplinary Seminar *(German 90, Political Science 51)* (3). See German 90 for description.

94A Myth and History (3). Myths and legends are the stuff of history. An interdisciplinary Capstone course treating topics such as Alexander the Great and George Washington as mytho-historical heroes; the Holy Grail; and uses of myth in the modern world. Fall or spring. (Alternate years.) Bullard.

94D Interdisciplinary Seminar in Renaissance Studies *(Romance Languages 94A and Comparative Literature 94A)* (3). An interdisciplinary, thematic study of Renaissance (14th, 15th, and 16th centuries) letters, art, historic movements in Europe. Fall or spring. Headley, Masters.

94E Revolution in Modern East Asia (3). Non-Western in focus and analytic and comparative in approach, this course deals with the revolutions that have defined the national life of Japan, China, Vietnam, and the Philippines. Fall or spring. (Alternate years.) Hunt.

95 Topics in Comparative History (3). Each section of this course is taught jointly by two faculty. The subject matter varies with the instructors and the topic but by definition comparative analysis forms a central feature. Fall, spring. History faculty.

96 An Introduction to History As a Discipline (3). This course integrates an introduction to approaches for studying history, an introduction to research methods, and intensive work in the skills of oral expression, reading critically, and writing. Staff.

98AB Honors in History (3 each). Permission of the instructor required. Introduction to the methods of historical research, designed to lead to the completion of an Honors essay. 98a - Fall; 98b - Spring. Griffiths.

101 Alexander (3). The rise of Macedonia; the careers of Philip II and Alexander; and the emerging Hellenistic Age. Fall or spring. McCoy.

102A Ancient Greek Warfare *(PWAD 106)* (3). War and the warrior in the archaic and classical Greek world, 7th - 4th centuries B.C. Fall or spring. McCoy.

102B Ancient Greek Society and Culture (3). Topical approach to the social and cultural history of the ancient Greek city states, c. 800 - 336 B.C. History 52 strongly recommended. Fall, spring. McCoy.

103 Roman History, 154 B.C. - 14 A.D. (3). Explores the transformation from Republic to Principate. Conducted in considerable part by student reports and classroom discussions. Fall or spring. Talbert.

104A The Early Roman Empire, 14 A.D. - 193 A.D. (3). Focuses upon administrative, social, and economic themes. Conducted in considerable part by student reports and classroom discussions. Fall or spring. Talbert.

104B The Later Roman Empire, 193 A.D. - 378 A.D. (3). Focuses upon administrative, social, and economic themes. Conducted in considerable part by student reports and classroom discussions. Fall or spring. Talbert.

105 Greek and Roman Historical Literature *(Classics 109)* (3). The study in English translation of selections from Herodotus, Thucydides, Livy, Tacitus, and others with consideration of their literary qualities and their readability as historians. Fall. (Alternate years.) McCoy.

106 The Medieval Church *(Religious Studies 106)* (3). The nature and workings of the Western church between roughly 600 and 1300. Emphasis on the church "from within"; organization, missionary strategies, liturgy, monasticism, popular religion. Spring. (Alternate years.) Pfaff.

107 Europe in Early Middle Ages (3). A survey of the Mediterranean World and northern Europe from the Later Roman Empire until the end of the ninth century. Fall. (Alternate years.) Behrends.

108 Europe in the Middle Ages, 900 - 1300 (3). A survey of the political and institutional development of primarily Western Europe from late Carolingian times to the end of the thirteenth century. Fall. Behrends.

109 Medieval Thought and Learning (3). A survey of the educational traditions and major (Latin) writers in Western Europe from late Roman times through the thirteenth century. Fall. (Alternate years.) Behrends.

110 The Medieval University (3). The origins and development of the university during the period 1100 - 1400; types of organization, curricula and degrees, intellectual life, town-gown and student-master relationships. Spring. (Alternate years.) McVaugh.

112 The Renaissance (3). Italy, birthplace of the Renaissance, 1300 - 1550. A study of the people, culture, and intellectual achievements of the Italian Renaissance with emphasis on the interaction between culture and society. Fall. Bullard.

113 Mediterranean Societies and Economics in the Renaissance World (3). A picture of Mediterranean social and economic life 1300 - 1600, with special focus on rural and urban society, family structure, patronage, work and wages, public and private finance. Spring. Bullard.

114 The Reformation *(Religious Studies 134)* (3). Examines a movement of religious reform that shattered Latin Christendom and contributed many of the conditions of early Modern Europe. Emphases: religious, political, social. Spring. Headley.

115 Europe in the Seventeenth Century (3). The century marks the watershed in European development. Emphases: statecraft, the emerging state-system, the new scientific world-view, the impact upon European society. Spring. (Alternate years.) Headley.

116 Europe under the Old Regime, 1715 - 1787 (3). The aristocratic Old Regime societies in confrontation with the modernizing forces of royal absolutism, Enlightenment ideology, and economic change. Spring. Smith.

117 The French Revolution, 1787 - 1815 (3). Collapse of the old regime, crisis of 1789, the first and second revolutions, the Terror in theory and practice, Thermidorean reaction, Directory, Napoleon and Napoleonic France, Revolutionary and Napoleonic imperialism. Spring. Smith.

118 Europe, 1871 - 1918 (3). Emphasizes the disintegration of Europe, culminating in the First World War and the fall of the continental empires. Fall or spring. (Alternate years). Staff.

119 Europe Since 1918 (3). The main currents in European history since the First World War. Special attention will be given to the interaction between national and international events and developments and to the emergence of the European Communities. Fall. Weinberg.

120A France in the Age of Monarchy (3). A survey of French history from the later middle ages to the French Revolution of 1789. Fall, summer. Smith.

120B France from 1787 to 1870 (3). The French people from the era of the Revolution to the Commune; cultural and social sources of political instability, the revolutionary tradition, liberal and conservative movements, industrialization. Fall. Reid.

121 France Since 1870 (3). French society and culture from the Paris Commune of 1871 to the student revolt of May 1968. Fall or spring. (Alternate years.) Reid.

122 Germany, 1815 - 1918 (3). The nature of Prussian society, the rivalry between Prussia and Austria for the command of German affairs, and the quality of Prussian leadership in the German Empire of 1871. Fall. (Alternate years.) Jarausch.

123 History of Germany Since 1918 (3). Politics and culture in the Weimar Republic, Nazi totalitarianism, and the reshaping of East and West Germany since World War II. Spring. Weinberg.

124 History of Spain (3). A survey of Spanish history from the Islamic invasion to Napoleon. Particular attention will be given to the period of the Habsburgs, 1516 - 1700. Spring. (Alternate years.) Headley.

125 Intellectual History of Europe, Early Period (3). The course examines the gradual erosion of and criticism within the classical Christian tradition that led to the emergence of a new mentality by the end of the seventeenth century. Two lectures, one discussion per week. Fall. Headley.

126 Modern European Intellectual History (3). The main developments in European thought from the Enlightenment to the twentieth century, with some attention to social context. Readings include Voltaire, Rousseau, Hegel, Marx, Toqueville, Mill, Flaubert, Nietzsche, Freud. Spring. Kramer.

127A Society and Family in Early Modern Europe (3). A survey of changes in urban and rural social structures, family life, courtship practices, sexual behavior, and the relations between the economy and population that occurred in preindustrial Europe. Spring. McIntosh.

127B War and Society in Early Modern Europe *(PWAD 127B)* (3). A critical examination, from the Renaissance to the eve of the French Revolution, of the changes in European land and naval warfare and their impact on society and government. Fall, spring. McIntosh.

127C The Origins of European Industrialization, 1650 - 1830 (3). A critical examination of Europe's economic and social history, focusing on the complex changes and developments that culminated in the industrialization of selective regions in England and on the continent. Spring. McIntosh.

128 European Social History, 1815 - 1970 (3). The social transformation of Europe from agrarian through postindustrial society, discussing population growth, family history, spread of education, class structure, social conflict, group ideologies, and mass politics, as well as every day lives and popular lifestyles. Fall. (Alternate years). Jarausch.

129 The Scientific Revolution (3). Traces the creation of scientific thought 1500 - 1700, from Leonardo to Newton, examining the various strands - Greek science, art, engineering, experimentation, occultism, etc. - woven into it. Fall. McVaugh.

130 History of Science from Newton to Einstein (3). A survey of the development since 1700 of the various branches of physical and biological science, culminating in the twentieth-century revolution in physics. Spring. McVaugh.

131 Origins of Medicine (3). Surveys the growth of Western medical knowledge and the changing demands on physicians and patients from Hippocrates to the beginnings of scientific medicine. Fall. [BA Western Historical Perspective] McVaugh.

132 Science and Thought in the Twentieth Century (3). A survey of twentieth-century intellectual history broadly conceived, including revolutionary developments in modern science. Spring. McVaugh.

133 English Economy and Society, 1200 - 1700 (3). Examines critical issues in the development of English society and economy in the centuries before industrialization. Spring. J. Bennett.

134 Medieval England (3). A consideration of England's origins, unification, and development as a national monarchy. Primary emphasis is on political, ecclesiastical, and cultural aspects. Spring. Pfaff.

135 Tudor and Stuart England, 1485 - 1660 (3). A lecture course, open to juniors, seniors, and graduate students. Fall.

136 England in the Eighteenth Century, 1660 - 1815 (3). A lecture course, open to juniors, seniors, and graduate students. Spring.

137 Great Britain in the Nineteenth Century, 1815 - 1901 (3). Emphasizes the social and economic foundations of the political, intellectual, religious, and cultural history of Victorian Britain. Fall. Soloway.

138 Great Britain in the Twentieth Century (3). Explores the economic and social foundations of British political, intellectual, and cultural history from 1901 to the present. Spring. Soloway.

139 The British Empire 1485 - 1857 (3). An interdisciplinary approach to such problems as the reasons for expansion, cultural contact in an imperial situation, founding of new societies, institutional transfer, and constitutional change. Fall.

140 The British Empire and Commonwealth, 1857 to the Present (3). An interdisciplinary approach to such problems as the "new imperialism," the scramble for Africa, the impact of war on empire, the development of colonial nationalism, and the coming of independence. Spring.

141 History of International Relations, 1870 - 1919 *(PWAD 140)* (3). Examines the interaction of European alliances, the impact of imperialism on international politics, the outbreak of World War I, and the diplomacy and peacemaking of that war. Fall. (Alternate years.)

142 History of International Relations, 1919 to Present *(PWAD 142)* (3). A study of the "new diplomacy," totalitarian foreign policy in the 1930s, the diplomacy of World War II, the Cold War, and the re-emergence of the multipolar balance of power. Spring. (Alternate years.)

143 History of Socialist Thought (3). An examination of the origins and development of Marxist ideas, and their application to specific historical conditions: in Germany, Russia, China, Algeria, Cuba, and modern industrial society. Spring. Griffiths.

144 The History of the Second World War *(PWAD 145)* (3). Origins, course, and effects of World War II, including all theaters, the impact at home, the Holocaust, the role of intelligence, and new technologies like radar, jets, and atomic bombs. Spring. Weinberg.

145 The American Colonial Experience (3). Major topics: European reconnaissance; founding of new societies; character and structure of institutions; thought and feeling from Cotton to Franklin; privilege and cost of empire. Fall. Nelson. Higginbotham.

146 Revolution and Nation-Making in America, 1763 - 1815 *(PWAD 146)* (3). Major topics: constitutional conflict in the British empire; independence and war; Confederation and Constitution; growth of political parties and nationality in a period of domestic change and international conflict. Spring. Higginbotham, Nelson.

147 Jacksonian America, 1815 - 1848 (3). The society and politics of the United States during the period dominated by President Andrew Jackson. Topics include economic development, the expansion of slavery, religion and reform, the changing roles of women, and the political movements associated with "Jacksonian democracy." Fall. Watson.

148 Civil War and Reconstruction, 1848 - 1900 (3). Focus is on causes, nature, and consequences of the Civil War. Fall. Barney.

149 U. S. Gilded Age/Progressive Era, 1877-1920 (3). Examines U. S. history around the turn of the century, concentrating on theme of "the price of progress." America's rise as an industrial and world power is explored against the background of intense political and cultural conflict. Spring. Fink.

150 United States History Since 1932 (3). Diverse developments as interpreted within the framework of certain broad and open-ended themes: particularly, individual freedom, social welfare, mass culture, and community. Fall and spring. Filene, Leuchtenberg.

152 U.S. Foreign Relations, 1914 to Present (PWAD 152) (3). A general survey of the emergence of the U.S. as a superpower with global rather than merely continental or hemispheric responsibilities. Spring. Hunt.

153 The United States in the Pacific Area (3). This course deals with America's commercial, missionary, diplomatic, and military involvement in the Pacific area, especially China and Japan, from 1784 to today. Fall. Hunt.

154 Intellectual and Cultural History of the United States, 1630 - 1860 (3). A survey of early American philosophical, religious, social, political, and esthetic thought, with an emphasis on leading figures and movements from Puritanism to Romanticism. Fall. Capper.

155 Intellectual and Cultural History of the United States, 1860 to Present (3). This course deals with the changes and continuities in the American character, mind, and society over the past century. Spring.

156 Popular Culture and American History (3). Study of the popular arts and entertainments of the 19th and 20th centuries and the ways in which they illuminate the values, assumptions, aspirations, and fears of American society. Fall or spring. (Alternate years.) Kasson.

157 American Constitutional History to 1876 (3). In a classroom environment characterized by discussion, simulation, and interaction, the antecedents, formation, and interpretation of the Constitution are confronted in a broad historical matrix. Fall. Semonche.

158 American Constitutional History Since 1876 (3). Using a classroom environment similar to 147, constitutional adjustments and change are related to psychological, political, social and economic factors, and to Supreme Court members. Spring. Semonche.

159 Public Religion in U.S. History *(Religious Studies 159)* (3). Prerequisite, Introductory History or Religious Studies course. A study of public religion in U.S. history including the relations of religion and government, the idea of American exceptionalism and destiny, the role of religious movements. Fall. Mathews.

160 United States Women and Religion *(Women's Studies 160)* (3). Prerequisites are introductory courses in religious or women's studies or U.S. history. An interdisciplinary consideration of women's roles, behavior, and ideas in the religious life of America from 1626 to 1982. Spring. Mathews.

161 Technology and American Culture (3). Technology's impact on American thought and society and the response it has engendered. Topics will include: the factory town; search for utopia; impact of Henry Ford; war and depersonalization. Fall or spring. (Alternate years.) Kasson.

162 The Promise of Urbanization: American Cities in the Nineteenth and Twentieth Centuries (3). A survey of the development of American cities since 1815 and their influence upon American history. Spring. Lotchin.

163 The Old South (3). Economic, cultural, and social history of the antebellum South. The region's political history will serve as a supporting part of the study. Spring. Williamson.

164 The South Since Reconstruction (3). A survey of the South during the past 100 years, covering developments in politics, economics, culture, and society. Course begins at the end of Reconstruction. Fall. Hunter.

165 History of Afro-Americans to 1865 (3). Survey of Afro-American history from origins to abolition of slavery. Examination of role of blacks in U.S. history to 1865. Focus on unique subculture of Afro-Americans. Fall. McNeil.

166 History of Afro-Americans, 1865 to Present (3). Examination of role of blacks in U.S. history after 1865. Focus on black subculture. Analysis of theories about the black experience in America. Spring. McNeil.

167 White Culture and Race Relations in the South (3). This course describes and analyzes the evolution of southern white culture with emphasis on the years since 1831. It describes Southern white culture as the result of the black presence. Fall and spring. Williamson.

168 Women in the South *(Women's Studies 168)* (3). An exploration of the distinctive themes in southern women's lives, using the evidence of history and literature. Spring. Hall.

169 Women and Public Policy in 20th-Century America *(Women's Studies 169)* (3). How gender-based cultural attitudes and social roles, collective action, social and economic change interacted to shape public policy with respect to work, family, and legal rights. Fall or spring. (Alternate years).

170 Introduction to Oral History *(Folklore 174)* (3). Introduces students to the uses of interviews in historical research. Questions of ethics, interpretation, and the construction of memory will be explored, and interviewing skills will be developed through field work. Fall. Hall.

171 Religious History of the South (3). An historical analysis of the religious life of Southerners from the Great Awakening to the present with an emphasis on how religion, social institutions, and cultural practices interact. History 21 or 22 or Religious Studies 29 recommended. Spring. Mathews.

172 Medicine and Society in America (3). A survey of major developments in the history of American medicine. Emphasis will be placed upon setting the practice of medicine as well as the experience of health and disease into broad social, cultural, and political contexts. Spring.

174 Pre-Columbian and Colonial Mexico (3). Examines pre-Columbian Indian civilizations, the Spanish conquest, colonial society, the rise of nationalism, and the achievement of political independence. Fall. Palmer.

175 History of Mexico Since Independence (3). Topical approach to the history of modern Mexico, from the wars of independence to the present. Emphasis is placed upon broad socioeconomic and political trends, particularly the success or failure of the Revolution of 1910. Fall. Joseph.

176 Inter-American Relations (3). Political, diplomatic, and economic relations in the Western Hemisphere from the independence of Latin America to the present. Special consideration to the concept of informal empire, power relationships, and policy formulation. Spring. (Alternate years.) Joseph.

177 History of Brazil (3). This course is concerned primarily with the creation of a new society through race mixture and culture change, and with the political and economic development of Brazil. Fall or spring. (Alternate years.) Joseph, Chasteen.

178 The Development of Latin American Society (3). Prerequisite, some contact with Latin America through courses or personal experience. Selected aspects of Latin American social history, such as race relations, land tenure, labor systems, violence, and social upheaval. Spring. (Alternate years.) Chambers, Joseph.

180 Slavery in the New World (3). A comparative approach to the institution of slavery in North America, Latin America, and the Caribbean. Fall. Palmer.

181 Intellectual History of Blacks in the Americas (3). Examines black writers in the Americas since 1829, especially in North America and the Carribean. Emphasizes the ideas of such individuals as Dubois, Garvey, Fanon, James, Guillen, Rodney, and Cesaire. Spring. Palmer.

183 Russia from Ivan the Terrible to Peter the Great (3). The evolution of a distinctive Muscovite society and culture. Territorial expansion; the rise of autocracy, serfdom, and the compulsory service-state; popular rebellions and the church schism; relations with the West. Spring.

184 Russia and the West in the Eighteenth Century (3). A comparative approach. Centering on Russia's contacts with the West, the resulting interaction, and the efforts of Russians to define the unique nature of their own society. Spring. (Alternate years.) Griffiths.

185 Russia, 1796 - 1917 (3). The diplomatic, military, and ideological confrontations with the West; the decline and fall of the Russian autocracy; the evolution of reform thought and revolutionary opposition. Spring. Brooks.

186A Revolution in Russia, 1900 - 1930 (3). A close study of Russia's age of revolution from the reign of the last tsar to the turbulent Stalin Revolution of 1929, with emphasis on the revolutions of 1917. Fall. Raleigh.

186B History of the Soviet Union, 1929 - present (3). An in-depth examination of Soviet social and political history from 1929 to the present. Spring. Raleigh.

187 Intellectual History of Imperial Russia (3). Interpretive lectures examine the most significant ideas and personalities and major social trends in modern Russia, emphasizing the decline of serfdom, growth of capitalism (and Marxism), and the impact of the West on Russia. Fall. Brooks.

188 The Rise and Fall of the Habsburg Empire, 1526 - 1918 (3). A study of the development of this multinational empire, its special role in the fortunes of Central Europe, and its demise under the impact of modern nationalism and great power conflicts. On demand. Anderle.

189 History of Czechoslovakia (3). A case study of a small nation in the world of superpowers. On demand. Anderle.

190 East Europe Since World War II (3). An examination of the countries of Eastern Europe, their origins and development since World War II, their cohesion and conflict. Fall. Anderle.

193 Resistance Movements and Nationalism in Africa (3). An attempt to define the features of various movements in Africa during the nineteenth and twentieth centuries which sought to resist foreign domination in the cultural and political spheres. Spring. Newbury.

194A African Peasants in Historical Perspective (3). Through case studies and readings on theory, this course, considers the factors of change in peasant societies in Africa: ecology, agrarian traditions, gender relations, colonial policy, capitalism, and peasant initiatives. Newbury.

194B Christianity in Africa: Priests, Pastors, and Preachers (3). This course analyzes the historical impact of missions on African societies, the redefinition of missionary practices by African Christians, and the development and varieties of Independent Christian churches in Africa. Newbury.

195 Islam: An Historical Introduction *(Religious Studies 195)* (3). A study of Islam in the historical context of its growth from the prophecy of Muhammad to a major force in a world civilization. Fall. (Alternate years.) Bodman.

197 Traditional China (3). Examines imperial China emphasizing socioeconomic and cultural institutions and developments. While various periods are discussed, course focuses mainly on Qing dynasty (1644 - 1911). Spring. Kessler.

199A Teaching American History: Materials and Inquiry (3). This course, aimed at education majors and MAT candidates, explores diverse teaching strategies in addressing selected problems in American history; both documentary sources and varied classroom approaches are stressed. Summer. Filene.

[1]Some examples of thematic concentrations would be: Revolution (four to six courses from History 81, 84, 103, 114, 117, 135, 146, 180, 186A, or 186B); the City (four to six courses from 73, 101, 103, 162, 112, or 179); International Relations (four to six courses from 63, 87, 89, 115, 118, 119, 132, 139, 140, 143, 152, or 176). These examples should be treated as examples only, and students should see their departmental advisers to discuss other thematic field possibilities.

Curriculum in Industrial Relations

Howard Aldrich, *Chair*

The Curriculum in Industrial Relations is an interdisciplinary, undergraduate program leading to the degree of Bachelor of Arts in Industrial Relations. The curriculum provides background orientation and useful general knowledge about the modern workplace and its institutional environment. The term "industrial relations," in its broadest sense, encompasses all aspects of employer-employee relations. Students are introduced to this field through the study of the economics of labor relations, industrial and organizational sociology, social psychology, and the history of business and labor. General College requirements in statistics, calculus, and American History provide students with a solid foundation for these interdisciplinary studies.

Given its focus on the institutional context and inner workings of organizations, the Industrial Relations Curriculum prepares students for a variety of entry-level positions in private or public sector organizations. Students who want to specialize in human resource management should seek further training in graduate or professional school.

Bachelor of Arts in Industrial Relations

For students entering the major as first-semester juniors in fall 1985 or later, the following requirements apply:

General College: All General College requirements must be met. Specific courses that must be taken, and that can be used to fulfill General College Requirements, include: Economics 10 (with a grade of C or higher), History 22, Mathematics 22 or 31, Psychology 10, and Sociology 10. In addition, students are required to complete one statistics course (chosen from Economics 70, Psychology 30, Sociology 52, or Business 24) and one course in social psychology (Sociology 12 or Psychology 33; Psychology 33 can also be used to satisfy the Arts and Sciences Social Sciences perspective).

Core Requirements: The Core consists of nine courses (27 hours) grouped into four areas. Students must earn at least 18 hours of C or better in the Core. Note: Some of these courses have prerequisites; students should consult departmental listings.

A. Economics Prerequisite. All students must complete Economics 100 by the end of their junior year.

B. Employer-Employee Relations (two courses required). One course must be taken from each of the following two subareas:
   1. Human Resource Management: Sociology 31 or Psychology 148
   2. Social Interaction: Sociology 143 or Psychology 119 or Psychology 187 or Speech 55

C. Human Resources and Work (two courses required):
   1. Economics 190
   2. Sociology 127

D. The Institutional Context of Work (four courses required):
   1. Economics 145
   2. Sociology 110
   3. Two courses chosen from the following five offerings: either Economics 135 or History 64; either Economics 193 or History 65; Sociology 115

Program for Honors Work

A student may, as a result of distinguished work, be awarded a degree with Honors or Highest Honors. This requires completion of a Senior Honors Thesis. Interested students should contact the Industrial Relations office for further information. Honors Students should enroll in the following two courses. INDR 98 will satisfy one of the course requirements in 4c above.

INDR 98 Honors Course (3). Directed independent research under the supervision of a faculty adviser who teaches in the Industrial Relations Curriculum. Staff.

INDR 99 Honors Course (3). Prerequisite, INDR 98. Preparation of an honors thesis and an oral examination on the thesis. Staff.

Curriculum in International Studies

Craig Calhoun, *Chair*
Marilyn Scott, *Adviser*

Globalization of the economy, cross-cultural relations, world-wide media, ecological crises and political transformations are all making international studies more important today. The Curriculum in International Studies offers an interdisciplinary program of study focusing on these and many other issues. It draws on courses throughout the social sciences, and offers students the chance to concentrate on any area of the world or on issues of global significance.

Courses deal with topics as diverse as the relations of the United States to other countries around the world; peoples and cultures of Latin America, Africa, or Asia; international economics; European politics; human rights; and problems of poverty in the Third World.

Students prepare for careers in business, diplomacy, international aid and economic development, and other forms of public service. The INTS major is also excellent preparation for graduate school in one of the social sciences, professions such as law, business, journalism, or in international affairs and area studies. About 250 juniors and seniors major in International Studies.

Bachelor of Arts with a Major in International Studies

International Studies majors must complete all requirements of the General College. In addition, they must show proficiency in one modern foreign language at the sixth semester level, or in one at the fourth and another at the second semester level.

International Studies majors must complete at least ten upper division courses in the social sciences and relevant humanities; these must include courses in at least three social science disciplines. Six of these courses must concentrate on one of:

A. a socio-geographic or cultural area (e.g. East Asia, Europe, Africa, Latin America),
B. a combination of two or more areas (e.g. the Hispanic world, the Third World), or
C. a global issue which crosses specific areas (e.g. economic development, ecological problems, population dynamics). All such concentrations must be approved by the Curriculum through its appointed advisers.

In addition, INTS majors must complete at least five courses in one social science discipline. These five courses may overlap with those in the student's area or issue concentration. They must, however, follow specific guidelines set by the Curriculum in consultation with the various departments and be periodically reviewed.

No courses fulfilling major requirements may be taken pass/fail.

Recommendations: In addition to fulfilling requirements, the Curriculum recommends that INTS students take INTS 77 (Global Issues) and continue study of a foreign language to a level of near fluency. All INTS students should also try to include a study abroad program in their undergraduate education, preferably in their sophomore or junior years.

Honors: Students who wish to submit a thesis for honors in International Studies should enroll in INTS 90 and 91 as two of their ten required courses. Consent of the Curriculum adviser is required.

77 Global Issues (3). An interdisciplinary approach to studying the origins, current dilemmas, and future trends of major issues confronting the global community, such as energy and resource depletion, food and population, war, nuclear arms, economic interdependence and international inequality. Fall and spring. Calhoun, staff.

90 Honors in International Studies (3). Directed independent research leading to the preparation of an honors thesis. Fall and spring. Staff.

91 Honors in International Studies (3). Preparation of an honors thesis and an oral examination of the thesis. Fall and spring. Staff.

92 Current Topics in International Studies (Var.). An interdisciplinary approach to the study of the background, current status, and future prospects for one of a series of global issues, such as the nuclear age, the environment, technological transition. Spring.

93H Great Decisions (1). Eight evening guest lectures, with a discussion session after each, on eight issues in current foreign policy. May be taken more than once, but not concurrently with Poli. Sci. 89. Spring. Ulin, staff.

99 Independent Study (Var.) Reading and research on special topics in international studies. Permission of instructor and adviser required.

Latin

(See Classics)

Curriculum in Latin American Studies

Lars Schoultz, Kenan Professor of Political Science, *Director*. *Advisory Board*: Professors Richard Bilsborrow (Biostatistics/Carolina Population Center), Donald Brockington (Anthropology), Sara Chambers (History), John Chasteen (History), Fred Clark (Romance Languages), Kenneth Coleman (Political Science), Richard Elam (Radio, TV and Motion Pictures), Alfred Field (Economics), Kaja Finkler (Anthropology), William Glaze (Environmental Sciences), Christopher Goertzen (Music), Jonathan Hartlyn (Political Science), Evelyne Huber (Political Science), William Ilgen (Latin American Bibliographer), Gilbert Joseph (History), C L Kendall (Business), Dana Loomis (Public Health/Epidemiology), Colin Palmer (History), Patricia Pessar (Anthropology), Rosa Perelmuter (Romance Languages/Spanish), Mónica Rector (Romance Languages), Alicia Rivero-Potter (Romance Languages), Maria Salgado (Romance Languages), Adam Versenyi (Dramatic Art), David Whisnant (English/American Studies/Folklore), Thomas Whitmore (Geography), Bruce Winterhalder (Anthropology), Cecilia Zapata (Maternal and Child Health). Professors emeriti, ex-officio: Julia Crane (Anthropology), Federico Gil (Political Science), Henry Landsberger (Sociology).

The University of North Carolina at Chapel Hill has a long and distinguished tradition of scholarly interest in Latin America. Courses in the languages, history, politics, geography, and social life of the region were offered by the beginning of the twentieth century. In 1915 they were coordinated into a special curriculum. As interest in Latin America grew among faculty and students, in 1940 the Institute of Latin American Studies (ILAS) was created to coordinate campus activity. The Institute was one of the first educational centers in the United States specifically dedicated to the study of Latin America.

Over the ensuing half-century, the Institute developed into a major center of scholarship and teaching on subjects related to Latin America. Today the major functions of the Institute are (1) to encourage and stimulate study and research on Latin America at UNC-Chapel Hill, (2) to serve as a campus medium for interdisciplinary communication on Latin America, including the sponsorship of a wide variety of campus activities that bring together faculty and students from a large number of academic disciplines, and (3) to promote the exchange of senior scholars and students, and to encourage close collaborative relationships between the University and institutions of higher learning in Latin America and the Iberian Peninsula.

After more than a half a century of informal cooperation, in the late 1980s UNC-Chapel Hill joined with nearby Duke University to create the Duke-UNC Program in Latin

American Studies. The Duke-UNC Program enables the two universities to offer an exceptionally broad range of courses and provide supplementary educational opportunities that neither institution could offer separately.

In 1990 the Duke-UNC Program received a major grant from the Andrew W. Mellon Foundation for additional cooperation. This enabled the Duke-UNC Program to offer a structured program of cross-campus teaching, bringing a Duke faculty member to the UNC campus each semester in return for a UNC faculty member teaching at Duke. In addition, research and training working groups on a variety of topics such as culture, politics, economics, the environment, health, inter-American relations and public opinion meet regularly throughout the academic year, bringing students and faculty together to conduct research. Undergraduate participation in these working groups is encouraged.

A combined seminar brings together undergraduate students from both Duke and UNC. The Latin American Research Seminar permits juniors and seniors majoring in Latin American Studies at UNC or Comparative Area Studies at Duke to receive training and conduct research as members of one of the working groups mentioned above.

In 1991 the Duke-UNC Program was designated a National Resource Center under Title VI of the Higher Education Act. As one of fourteen such centers nationwide, the Duke-UNC Program is provided with resources that significantly enrich our curriculum. In addition to encouraging research and teaching of Latin American subjects, the Duke-UNC Program is a campus medium for interdisciplinary communication of information related to Latin American Studies, including the sponsorship of a variety of gatherings on both campuses - Latin American guest lectures and seminars, films and slide shows, Latin American luncheons - that bring together interested faculty and students from different disciplines. The Duke-UNC Program also seeks to promote the exchange of scholars and students, and to encourage close relationships between UNC-Chapel Hill, Duke, and institutions of higher learning in Latin America.

The University's long-standing commitment to the study of Latin America is strongly reflected in its library collections, which are particularly rich in resources on Latin American literature, history, and political science. Extremely valuable materials can also be found in both the rare books and the manuscripts collections. Complementing these resources on Latin America are the library's traditionally strong collections in Spanish and Portuguese literature, history, and culture. In addition, the University library has long maintained a cooperative program for the acquisition and sharing of Latin American materials with nearby Perkins Library of Duke University, a program which vastly expands the comprehensiveness and availability of local resources for the study of Latin America. The joint collections of the libraries of Duke and UNC-Chapel Hill are the only major holdings of research-level Latin American resource materials in the Mid-South, containing 7.6 million volumes.

Each semester a list of Latin American related course offerings from the Duke-UNC Program is distributed by the Institute. Over 100 courses dealing directly with Latin American Studies are offered by the Duke-UNC faculty members in their respective disciplinary departments. UNC students are encouraged to enroll in Latin American Studies courses at Duke.

For further information about Latin American Studies at UNC-Chapel Hill, contact the **Institute of Latin American Studies 310 - 316 Hamilton Hall, UNC-Chapel Hill, Campus Box 3205. Telephone: (919) 966-1484.**

Bachelor of Arts with a Major in Latin American Studies

General College: all General College requirements must be met. The language requirement must be fulfilled with either Portuguese 1 - 4 or Spanish 1 - 4 and one additional course in that language which is not a translation course. The following courses are recommended for satisfying General College perspectives requirements: Literature - Portuguese 35 or 40, Spanish 21 or 35 or 40 or 46; Social Science - Anthropology 42, Economics 10, Geography 20, Political Science 41 or 52, Sociology 10; Non-Western/Comparative - Political Science 56, History 24 or 25.

Third and Fourth Years: specific requirements to be met in accordance with the following distribution.

Each major in Latin American Studies (LAS) selects a primary concentration of the Humanities or the Social Sciences. When one is chosen, the other becomes the student's secondary concentration.

To graduate with a major in Latin American Studies, a student must complete eight courses in his or her primary concentration, including Latin American Studies 90, a required interdisciplinary senior seminar. These eight courses must be distributed so that at least three courses are completed in each of the two sequences of that concentration. In addition, each LAS major must earn at least 18 hours of C or higher (not a C average) in his or her primary concentration. LATM I (Introduction to Latin American Studies) can be used as one of the eight courses.

Each LAS major also must complete five courses in his or her secondary concentration. These five courses must be distributed so that at least two courses are completed in each of the two sequences.

Humanities Concentration

History Sequence

HIST 24 Latin America under Colonial Rule*
HIST 25 Latin America Since Independence
HIST 81 Revolutionary Change in Latin America
HIST 82 An Introduction to the Society and Culture of Latin America: history, Literature, and Cinema
HIST 90 Topics in History**
HIST 91 Independent Studies in History**
HIST 174 Pre-Columbian and Colonial Mexico
HIST 175 History of Mexico Since Independence
HIST 176 Inter-American Relations

HIST 177 History of Brazil
HIST 178 The Development of Latin American Society
HIST 179 Latin American Urban History
HIST 180 Slavery in the New World

Language-Literature Sequence
Portuguese
PORT 35 Modern Brazilian Literature in Translation
PORT 51 Conversation
PORT 53 Luso-Brazilian Civilization
PORT 95 Special Topics
PORT 103 Survey of Brazilian Literature: I
PORT 104 Survey of Brazilian Literature: II
PORT 135 Brazilian Drama

Spanish
SPAN 35 Contemporary Latin American Prose
SPAN 51 Advanced Conversation
SPAN 53 Spanish American Culture and Civilization: Mexico, Central America, and the Andes
SPAN 54 Spanish American Culture and Civilization: The River Plate and the Caribbean Countries
SPAN 61 Conversation III: Current Events in the Spanish World
SPAN 73 Survey of Spanish American Literature
SPAN 81 Spanish and Spanish American Poetry
SPAN 87 Contemporary Spanish American Poetry
SPAN 95 Special Topics
SPAN 113 Spanish American Literature: Colonial and Nineteenth Century SPAN 114 Spanish American Literature: Modernism to the Present

Social Sciences Concentration
Political Science Sequence
POLI 56 Contemporary Latin American Politics
POLI 58 Cuban Revolutionary Politics
POLI 87 Latin America and the United States in World Politics
POLI 95 Undergraduate Seminar**
POLI 99 Independent Study in Political Science**
POLI 110 Politics and Literature**
POLI 119 Politics of Authoritarian Regimes
POLI 127 Government and Politics in Latin America
POLI 140 International Political Economy
POLI 147 The United States and Latin America
POLI 167 Political Thought and Ideology in Contemporary Latin America

Anthropology-Economics-Geography-Sociology Sequence
Anthropology
ANTH 42 Folk Cultures in the Modern World
ANTH 127 Aboriginal Cultures of Mexico and Central America
ANTH 131 Archeology of South America
ANTH 132 Latin American Cultures
ANTH 133 Peoples of the Caribbean

Economics
ECON 161 International Economics
ECON 162 Topics in International Economics
ECON 163 Economic Development

Geography
GEOG 159 Latin America

Sociology
SOCI 92 Independent Study in Sociology**
SOCI 153 Social Change in Latin America

*May also be offered as LATM 47
**If on Latin American topic

Study Abroad
One of the most attractive aspects of the major in Latin American Studies is the opportunity for students to broaden their knowledge of Latin America and the Iberian peninsula through participation in one of the University's study abroad programs. Living and studying in Latin America is an experience that all majors should consider, although study abroad, is in no sense a requirement of the major. The College of Arts and Sciences offers programs at the Universidad de Belgrano in Buenos Aires, Argentina, at the Universidade Federal Fluminense in Niteroi, Rio de Janeiro, Brazil, at the Universidad Nacional Autonóma de Mexico in México City and at the Universidad San Francisco de Quito in Ecuador. The Department of Romance Languages also conducts a program at Seville, Spain.

Students interested in these opportunities should contact the study abroad adviser in the Office of International Programs, Caldwell Hall.

Intensive Yucatec Maya
A three-part intensive introduction to modern Yucatec Maya with a secondary focus on ancient and colonial Maya literature is offered in the Summer.

I. CLASSROOM INSTRUCTION. The first part consists of four weeks of intensive classroom instruction and conversational practice (six hours a day, five days a week with additional evening practice.) Conversation, grammar, and classical Yucatec texts are featured, and students have the opportunity to focus individually on the acquisition of skills of special interest.

II. HIEROGLYPHICS WORKSHOP. The second part consists of a weekend workshop focusing on the structure and content of the ancient Maya writing system, with comparisons to Yucatec grammar and literature. This workshop is held at the Duke University Museum of Art, which houses one of the nation's largest collections of pre-Columbian and Mayan artifacts.

III. FIELD STUDY. The third part involves a two-week field orientation in Yucatan. Students live in the community of Opichén, Yucatán, 85 km. from Mérida, where they are in contact with monolingual Maya families and share in their daily lives. Students also spend time in the city of Mérida where they continue language classes conducted by native Yucatec speakers and participate in seminars and lectures led by distinguished Yucatecan historians, ecologists and anthropologists. Special field trips introduce participants to the rich pre-Hispanic and colonial heritage of the area. Summer. MacLeod, Reents-Budet, and Vermont-Salas.

Honors and Independent Study

Curriculum majors with an overall grade average of 3.25 are invited to pursue a degree with honors by writing an honors thesis during their senior year. Each thesis is written under the direction of an appropriate faculty adviser; when completed it must be defended orally before an examining board of at least three faculty members.

Students interested in working on an honors thesis should consult with one of the curriculum advisers during the second semester of their junior year.

Awards

Each year the Institute recognizes superior scholarly achievement and encourages students to travel and conduct research in Latin America. The Federico G. Gil Award is given for the best honors thesis on a Latin American topic. Two summer travel awards - the Julia G. Crane Travel Award and the Federico G. Gil Travel Award - are presented to rising seniors in the Curriculum in Latin American Studies who plan to conduct original research in Latin America in the summer, leading to an honors thesis.

Advising

Each major in Latin American Studies is assigned to an adviser who provides information and guidance in completing the Institute's requirements for graduation. In addition, each major is expected to consult regularly with the Arts and Sciences adviser for Latin American Studies in Steele Building. Early and frequent consultation with the Arts and Sciences adviser is particularly important for the increasing number of students who wish to double major in Latin American Studies and another academic discipline.

The Institute's offices are located on the third floor of Hamilton Hall, where visitors and members of the University community are always welcome.

40 Introduction to Latin American Studies (3). An interdisciplinary introduction to the study of the culture, society, history, and economy of Latin America, with an emphasis on the analysis of classic interpretations of both traditional and modern Latin America. Fall. Staff.

46 Latin America under Colonial Rule *(History 24)* (3). Social and economic development under Spanish Colonial rule, with an emphasis on Mexico and Peru. Fall. Joseph, Chambers.

47 Latin America Since Independence *(History 25)* (3). A general introduction to Latin American society, culture, politics and economics from a historical perspective. Focus will be on the events of past two centuries. Spring. Chasteen.

70 Special Topics in Latin America (3) Alternate years. Staff

79 Society and Culture in Latin America (3). Alternate years. Staff

80 Independent Study of Latin America (3). Special reading and research in selected field under the direction of one or more members of the Latin American Studies faculty. Fall and spring.

90 Problems and Issues in Contemporary Latin America (3). An interdisciplinary seminar under the direction of one member of Latin American Studies faculty. Spring. Staff.

91 Honors in Latin American Studies (3). Directed independent research leading to the preparation of an honors thesis. Fall and spring. Staff.

92 Honors in Latin American Studies (3). Prerequisite, Latin American Studies 91. Preparation of an honors thesis and an oral examination on the thesis. Fall and spring. Staff.

160 Intensive Yucatec Maya (6). Three part intensive introduction to modern Yucatec Maya, with a secondary focus on ancient and colonial Maya literature. Summer. McLeon, Reents-Budet and Vermont-Salas.

199 Seminar on Latin American Issues (3). Alternate years. Staff.

200 Research Topics in Latin American Studies (3). Alternate years. Staff.

Curriculum in Leisure Studies and Recreation Administration

Lee E. Meyer, *Chair*

Recreation and leisure are inextricably tied to personal and community quality of life. As a profession in the field of human services, leisure services focuses on people and their opportunities to pursue recreation and leisure experiences.

The Curriculum in Leisure Studies and Recreation Administration is committed to educating individuals who 1) can function effectively as professionals in the field of recreation and leisure services and 2) understand and advocate for the value and the importance of leisure in their own lives and the lives of others in the community.

The Curriculum's pedagogical orientation reflects the social and behavioral roots of the field of recreation and leisure services. The Curriculum faculty encourage the preparation of the recreation professional through a broad interdisciplinary based education coupled with practical work experience. This professional education enables the student to understand and relate to a changing social order as well as to assume professional positions in public, private, and commercial recreation and other human services agencies.

The Curriculum faculty also place importance on the consideration of the social and psychological values of leisure activities, the relationship between quality of life and leisure choices, the analysis of play behavior, and that all individuals have the right to leisure.

The Curriculum in Leisure Studies and Recreation Administration offers courses as a part of the general elective process of the University, as well as those courses which are designed primarily for majors. The Curriculum's program of study is accredited by the National Recreation and Park Association's Council on Accreditation.

Students interested in the B.A. in Recreation Administration and Leisure Studies should declare their major during their sophomore year. This enables them to take

some of the courses suggested by the Curriculum while enrolled in the General College.

The major consists of required and elective courses. the required courses are LSRA 70, 120, 130, 150, 160, 180 and 181. In addition to these requirements, one elective is required for a total of twenty-four hours, not including LSRA 10, which is required and prerequisite to all LSRA 100 level courses. LSRA majors then must earn a C or better in LSRA 10. They must also take a course in statistics (STAT 11 or its equivalent) and a basic course in Sociology and Psychology and, in accordance with the regulations of the College of Arts and Sciences, they must earn 18 hours of C or better in their major course work.

In addition to the required major courses, students are expected to take course work in Art, Business Administration, Dramatic Art, Economics, English, Music, Physical Education, Political Science, Psychology, Sociology, and Speech. A specific listing of suggested courses is available in the Curriculum office in the LSRA Undergraduate Program Description.

Minor in Recreation Administration

The minor would consist of five courses. There would be three required courses:

LSRA 10: Introduction to Leisure Services
LSRA 70: Special Recreation Services
LSRA 120: Program Planning for Recreation Services

The two remaining courses would come from the other LSRA courses (below the 200 level) but may not include:

LSRA 160: Administration of Recreation Services
LSRA 176: Special Program Services in Therapeutic Recreation
LSRA 180: Supervised Field Training in Recreation
LSRA 181: Supervised Field Training in Recreation

10 Introduction to Leisure Services (3). An introduction to the field of leisure services and its various elements, developed from an historical perspective. The course surveys the park and recreation movement, the leisure service delivery system, and the theoretical and conceptual basis of that system. Fall, spring.

40 Outdoor Recreation and Environmental Issues (3). A survey course taught from a psychosocial perspective that addresses the roles of public and private agencies in meeting increased demand for outdoor recreation. Emphasizes the implications of environmental awareness on outdoor recreation. Bialeschki, Henderson.(A & S Social Science Perspective)

70 Special Recreation Services (3). An analysis of the problems confronting disadvantaged individuals and groups including the aging, economically disadvantaged, mentally retarded, physically disabled, and youth. Specific attention is given to meeting their leisure needs in community settings. Fall and spring. Bullock and Bedini.

96 Independent Studies in LSRA (Var.). Individual readings, research and/or field study of a recreation issue, problem, service system, or activity pattern. The course may take the form of an independent study or seminar depending upon student interests and enrollment. Staff.

101 Women, Work, and Leisure (3). Implications of the relationship between women and leisure from a lifestyle perspective, and an analysis of the changing role of women and changing leisure concepts from a feminist perspective. Fall and spring. Bialeschki and Henderson. (A & S Social Science Perspective).

111 Play in America (3). A study of play as a personal and cultural pheonomenon. Consideration is given to the impact that religion, philosophy, social structure, economics, technology and education have had on the valuing of play in America. Fall and spring. Meyer. (A & S Social Science Perspective).

112 Leisure in a Diverse Society (3). An analysis of diverse populations and the meaning and impact of leisure on the lives of these individuals. Race, class, gender, culture, age, disability, employment and sexual orientation will be addressed related to implications for leisure. Fall. (B.A. level Social Science perspective.)

120 Program Planning for Recreation Services (3). A study of the principles of planning recreation programs and the factors which affect its implementation and functioning. Fall. Meyer.

130 Introduction to Group Dynamics and Community Leadership (3). An analysis of the techniques, methods, and motives of group and community leaders. Special attention is focused upon the roles of organizational structure, personnel policies, and inservice training programs. Fall and spring. Sessoms and Bialeschki.

140 Recreation Spaces: Their Design and Use (3). Principles of planning recreation areas and facilities and the relationship of human needs to environmental resources. Spring. Meyer.

141 Recreation and the Private Sector (3). Major suppliers of recreation opportunities in the private sector will be identified and analyzed. Major topics that will be covered include commercial recreation, industrial recreation, and travel and tourism. Fall. Henderson.

150 Evaluation of Recreation Services (3). Techniques and application of various methods for evaluating organized recreation services and programs. Fall. Bullock.

160 Administration of Recreation Services (3). Analysis of recreation systems from the standpoint of organization, administration, finances, training, legislation, public relations, and coordination of community resources. Fall. Henderson.

171 Leisure and the Aging (3). Survey in gerontology and geriatics as fields of study and professional services as they relate to the free-time behaviors of the aging. Visits to local service facilities and recreation agencies. Fall. Bedini.

175 Introduction to Therapeutic Recreation Services (3). History and philosophy of therapeutic recreation. A survey of basic counseling/interactional styles, clinical and administrative skills, and intradisciplinary approaches in a variety of clinical settings. A five-hour practicum is required. Fall. Hatfield and Bedini.

176 Special Program Services in Therapeutic Recreation (3). Development of helping skills for the practice of therapeutic recreation emphasizing rationale, techniques, and role responsibilities of therapeutic recreation in the area of leisure education. Fall and spring. Staff.

180/181 Supervised Field Training in Recreation (3, 3). Prerequisites, three or more courses in recreation; students will have opportunity to receive varied practical on-the-job experience in one of many agency types. Staff.

199 Selected Issues Seminar (Var.). Current issues, techniques, and research of a topical short-term nature are the focus of these seminars. Generally offered during the summer. Staff.

Department of Linguistics

Randall Hendrick, *Chair*. *Advisory Committee*: Professors Samuel Fillenbaum, Miles Fletcher, Victor Friedman, Robert Howren, Larry King, William Lycan, Catherine Maley, Craig Melchert, Sidney Smith, Maria Tsiapera; Associate Professors Connie Eble, Paul Roberge.

Courses in the Department are offered both for the general student and for those who wish to receive the B.A. in Linguistics. Courses in Linguistics are intended to open up systematic perspectives on the nature of human language; by means of detailed studies of language structure and language change, the sound system of language, and the syntactic system of language.

Successful completion of the undergraduate major in Linguistics leads to the award of the degree of Bachelor of Arts. The major is designed to provide a fundamental understanding of modern linguistics for the student seeking a general education in the liberal arts as well as for the student preparing for graduate study. Students interested in the Linguistics major must consult with the Department undergraduate adviser.

With respect to the General College requirements in foreign language and mathematics, the following recommendations should be noted: (1) Students choosing to satisfy the requirement by taking a language other than the one used to meet the entrance requirement are strongly encouraged to satisfy the General College foreign language requirement with a non-Indo-European language. (2) The basic requirement in Mathematical Science should be met by a selection from the following: PHIL 21, COMP 14, MATH 22, STAT 11.

Majors are required to take the introductory series LING 60, 61, and 62, plus LING 83 and at least three additional linguistics courses numbered 50 - 199, excluding 100. (LING 100 is closed to students taking the LING 60, 61, 62 sequence.)

Students majoring in linguistics are expected to complete at least through level four of a foreign language and are encouraged to study more than one language.

Students majoring in linguistics may either concentrate entirely in linguistics, following an approved program of linguistics courses beyond those listed above, or they may elect to pursue a program of study which combines the courses above with an approved sequence of courses in a field related to linguistics. Suggested second-field options are: linguistic anthropology, computer processing of language data, psychology of language, philosophy of language, sociology of language, study of a particular language or language family, applied linguistics. The second-field option will be planned in consultation with the student's adviser.

Minor in Linguistics

The undergraduate minor in Linguistics consists of four linguistics courses numbered 60 or higher. Two of these courses must be selected from LING 60, 61, and 62. In order to fashion a coherent program of study that complements the student's major, the Department of Linguistics encourages students to select the remaining two courses in consultation with the Department undergraduate adviser.

9 Freshman Seminar (3). Topics vary. Fall and spring. Staff.

30 Introduction to Language (3). A survey of the many aspects of human language, including the history of language, similarities and differences among languages, language and culture, dialects, writing systems, child language acquisition, animal "languages," and the use of computers in analyzing languages. Linguistic methods used to describe and relate languages. Fall and spring. Staff.

60 Sound Patterns in Language (3). Prerequisite, Linguistics 30 or consent of instructor. Introduction to the analysis and description of phonological systems. Includes some preliminary training in phonetics. Fall. Howren.

61 Introduction to Transformational Grammar (3). Prerequisite, Linguistics 30 or consent of instructor. Introduction to the goals and methods of transformational analysis, using English primarily, but examining how these techniques can be used to describe syntactic processes in other languages. Spring. Hendrick, Webelhuth.

62 Linguistic Variation and Language Change (3). Prerequisite, Linguistics 30 or consent of instructor. Introduction to the analysis and description of language change, relationships among languages, and types of linguistic structure. Spring. Melchert.

70 Issues in Linguistics (3). Prerequisite, Linguistics 30 or consent of instructor. In-depth treatment of a selected issue or topic in linguistics. (Topic will vary with the instructor.) Course may be taken more than once when the topic varies. Fall or spring. Staff.

83 Linguistic Structuralism: Sources and Influences (3). Linguistic structuralism as a background for modern theories of language. Tsiapera.

97, 98 Honors (6). See the Program for Honors in the College of Arts and Sciences, and the Department Honors Adviser. Fall and spring. Tsiapera.

100 Introduction to General Linguistics *(Anthropology 179)* (3). An introduction to the scientific study of language. The nature of language structure. How languages are alike and how they differ. Fall. Melchert.

101 Introduction to Historical and Comparative Linguistics *(Anthropology 181)* (3). Theories and methods of historical and comparative linguistics, with emphasis upon the Indo-European family. Spring. Tsiapera.

102 Approaches to Teaching English As a Foreign Language (3). Methods, theoretical approaches, and techniques in teaching English to speakers of other languages. On demand. Howren.

104 Symbolic Logic *(See Philosophy 101)* (3).

105 Computer Organization *(See Computer Science 120)* (3).

106 Greek Dialects *(See Greek 106)* (3).

110 Philosophy of Language *(See Philosophy 110)* (3).

115 Topics in Linguistics (3). Directed readings on linguistic topics not covered in specific courses. Fall and spring. Staff.

116x English for Foreign Students (3). English for nonnative speakers. Emphasis on spoken or written English according to needs of students enrolled. Fall and spring. Staff.

120 Linguistic Phonetics *(Anthropology 180)* (3). Introduction to the general principles of linguistic phonetics; anatomy of vocal tract, physiology of speech production, universal phonetic theory. Practice in the recognition and transcription of speech sounds. Fall. Howren.

123 Phonological Analysis *(Anthropology 183)* (3). Prerequisite, Linguistics 120 or equivalent. Introduction to the principles of modern generative phonology. Methods and theory of phonological analysis. Not normally open to those who take Linguistics 60. Spring. Howren.

124 Phonology II (3). Prerequisite, Linguistics 123. Intermediate phonological theory and analysis. Fall. Howren.

127 Morphology (3). Prerequisite, Linguistics 30, 100 or permission of instructor. Crosslinguistic investigation of internal word structure: inflection and derivation, word formation rules vs. affixation, autosegmental morphology, morpholexical and morphophonemic rules, and the interaction of morophology with phonology and syntax. Fall. Hendrick, Webelhuth.

130 Introduction to Grammar I *(Anthropology 190)* (3). Prerequisite, Linguistics 100 or equivalent, or consent of instructor. Methods and theory of grammatical analysis within the transformational generative framework. Special emphasis on analyzing syntactic and semantic structures of English. Fall. Hendrick, Webelhuth.

133 Introduction to Grammar II *(Anthropology 193).* (3). Prerequisite, Linguistics 130 or equivalent. Methods and theory of grammatical analysis, with special reference to transformational grammar. Spring. Hendrick, Webelhuth.

135 Prague School Structuralism (3). Discussion of selected works by Trubetzkoj, Jakobson, Mathesius and other scholars associated with the Prague Linguistic Circle. 137 Semantics (3). Prerequisite, Linguistics 30, 100 or permission of instructor. Semantics as a part of linguistic theory: co- and disjoint reference among nominals, "crossover" phenomena, quantifier scope, lexical semantics, Montague Grammar and compositional semantics, and explanatory universals in semantic theory. On demand. Hendrick, Webelhuth.

139 Language of Time (3). Prerequisite, Linguistics 30, 100, or permission of instructor. The representation of time and temporal relations in natural languages. Cross-linguistic study of tense and aspect distinctions, modality, temporal adverbials, temporal anaphora, and sequences of tenses. Hendrick.

140 Mathematical Linguistics (3). Introduction to topics in logic, set theory and modern algebra with emphasis on linguistic application. Automata theory and the formal theory of grammar with special reference to transformational grammars. No previous mathematics assumed. On demand. Staff.

142 Indo-European Culture and Society (3). Survey of nonmaterial aspects of Indo- European society recoverable by linguistic reconstruction, including law, religion, economics, poetics. Review of the Urheimat problem. No knowledge of comparative grammar is assumed. On demand. Melchert.

145 Language and Mind Linguistics and the Brain (3). *Prerequisite, Linguistics 30, Linguistics 100, Philosophy 35, English 36, or permission of the instructor.* The course treats the relationship among linguistics, artificial intelligence, neurobiology, cognitive psychology, and the philosophies of mind, language, and science. *On demand.*

150 Introduction to Indo-European: Phonology (3). A survey of the phonological systems of the major Indo-European languages and their development from Proto-Indo-European. Fall, alternate years. Melchert.

151 Introduction to Indo-European: Morphology (3). Prerequisite, Linguistics 150 or permission of the instructor. Introduction to the major morphological categories in the Indo-European languages and their development from the proto-language. Spring, alternate years. Melchert.

154 History of the Spanish Language (see Spanish 126) (3).

155 Spanish Phonetics and Phonology (see Spanish 145) (3).

156 The Structure of Modern Spanish (see Spanish 146) (3).

160 The Structure of Early English (3). Prerequisite, permission of instructor. Topics in the linguistic structure of old, middle, and early modern English in the light of theories of phonology, morphology, and syntax. Topics vary. Spring. Howren.

162 The Structure of Chinese *(Chinese 162)* (3). Prerequisite, permission of instructor. Introductory linguistic description of Modern Mandarin Chinese. For students in linguistics with no knowledge of Chinese, and students of Chinese with no knowledge of linguistics. Melchert.

164 History of the French Language *(see French 126)* (3).

165 French Phonetics *(see French 145)* (3).

166 Structure of French *(see French 146)* 3).

170 Sociolinguistics (3). Survey of topics in the study of language in its social context; language varieties and functions, multilingualism, social dialects, implications for linguistic theory. Fall. Staff.

175 Language in Politics (3). Examines language as a political issue in the 19th and 20th centuries. Emphasis placed on American and British politics but attention to one other national context as well. Hendrick.

183 History and Philosophy of Linguistics (3). Linguistic theories from classical times to the present with special emphasis on the origins of contemporary theories. Fall. Tsiapera.

184 Language and Culture *(See Anthropology 184)* (3).

Chinese

Requirements for the Minor in Chinese are found in the Curriculum in East Asian Studies section.

1 Elementary Chinese (4). Introduction to Mandarin Chinese providing instruction in the basic grammar common to both the spoken and written language. Spoken Mandarin will be emphasized and text materials will be in romanization. Five hours per week, three devoted to instruction in grammar and two to oral practice. Fall. Staff.

2 Elementary Chinese (4). Continued emphasis on spoken Mandarin but with accelerated presentation of characters. The aim is to present a total vocabulary of 300 characters by the end of the term. Five hours per week, three devoted to grammar and two to oral practice and drill in the writing of characters. Spring. Staff.

3, 4 Intermediate Chinese (3 each). Prerequisite, Elementary Chinese or permission of instructor. Second-year level of study of grammar of spoken language and written vernacular. Emphasis on reading and writing of characters. Fall and spring. Staff.

50 Introduction to Chinese Civilization (3). A course designed to introduce both beginning undergraduate majors in Far Eastern Studies and General College students to the Chinese world of past and present. Fall. Seaton.

51 Introduction to Chinese Culture Through Narrative (3). This course shows how Chinese historical legends define and transmit the values, concepts, figures of speech, and modes of behavior that constitute Chinese culture. Fall, spring. Henry.

110, 111 Advanced Chinese (3 each). Prerequisite, Intermediate Chinese or permission of instructor. Advanced readings in Chinese. Three hours per week. Fall and spring. Staff.

112, 113 Readings in Chinese I and II (3). Prerequisite, Chinese 111 or permission of instructor. Selections from modern Chinese literature. Further training in speech and composition for students whose Chinese is already reasonably developed. Fall, spring. Henry, Seaton.

115 Topics in Chinese Literature and Language (3). Prerequisite, Chinese 111 or permission of instructor. Directed readings in Chinese literature and language on topics not covered by scheduled courses. Fall and spring. Staff. 120, 121 Literary Chinese (3 each). An introduction to the literary language of the Chinese classics. Fall and spring. Henry, Seaton.

133 Chinese Literature in Translation through the T'ang (3). A survey of Chinese literature from the classical period to the end of the T'ang dynasty (906 A.D.). Fall. Seaton.

134 Chinese Literature in Translation Since the Sung (3). A survey of Chinese literature from the Sung Dynasty to the present. Spring. Seaton.

144 Chinese Literature in Translation (3). Selected topics in Chinese literature concentrating on one period of one genre. Spring. Seaton.

145 Topics in Chinese Prose (3). Selected topics in Chinese fiction historical writing, and prose belles lettres, concentrating on one period of one genre. Fall, spring. Henry.

162 The Structure of Chinese *(Linguistics 162)* (3). See Linguistics 162 for description.

Japanese

Requirements for the Minor in Japanese are found in the Curriculum in East Asian Studies section.

101 Elementary Japanese (4). Introduction to Modern Japanese with text and supplementary materials. Hiragana and katakana scripts are introduced. Weekly class hours devoted to basic sentence pattern exercises, speaking and writing practice, and creative application. Fall. Staff.

102 Elementary Japanese (4). Prerequisite, Japanese 101 or permission of the instructor. Continued beginning course of Modern Japanese with text and supplementary materials. Approximately 150 kanji are introduced. Focus on basic sentence pattern exercises, speaking and writing practice, and creative application. Free conversation encouraged. Spring. Staff.

103 Intermediate Japanese (3). Prerequisite, Japanese 102 or permission of instructor. Emphasis on situational Japanese, verb conjugations, conjunctions, and approximately 150 new kanji. Memorization of dialogs, speaking practice, and creative application expected. Participation in weekly Japanese table encouraged. Fall. Staff.

104 Intermediate Japanese (3). Prerequisite, Japanese 103 or permission of instructor. Continued emphasis on situational Japanese, verb conjugations, other grammar points, and approximately 150 - 200 new kanji. Memorization of dialogs, speaking and writing practice, and creative application expected. Participation in relevant extracurricular activities encouraged. Spring. Staff.

105 Advanced Japanese (3). Prerequisite, Japanese 104 or permission of instructor. Written Japanese introduced to students who have learned over 400 kanji. Entire class conducted in Japanese. Comparable to intensive intermediate level taught in Japan to non-native speakers. Fall. Staff.

106 Advanced Japanese (3). Prerequisite, Japanese 105 or equivalent. Spoken and written Japanese for students who have learned more than 600 kanji. Entire class conducted in Japanese. Comparable to intensive intermediate level taught in Japan to nonnative speakers. Spring. Staff.

107 Literary Japanese (3). Prerequisite, Japanese 106 or equivalent. Designed to further improve reading skills. Students work independently using newspaper and magazine articles, literary works, academic publications, etc. Oral reports, discussions, and original compositions in Japanese required. Fall. Staff.

108 Literary Japanese (3). Prerequisite, Japanese 107 or equivalent. Designed to further improve reading and speaking skills. Students work independently using newspaper and magazine articles, literary works, academic publications, etc. Oral reports, discussions, and original compositions in Japanese required. Spring. Staff.

115 Topics in Japanese Languages and Literature (3). Prerequisite, instructor's permission. Possible areas of study include business Japanese, Japanese-English translation, and scientific technical Japanese. This course may be taken more than once for credit. Fall and spring. Staff.

Curriculum in Marine Sciences

Christopher S. Martens, *Chair*

The Curriculum in Marine Sciences offers instruction and performs research in biological, chemical, geological, and physical oceanography. Although primarily a graduate curriculum, it offers basic courses and an academic minor to advanced undergraduates majoring in other science fields. Undergraduate students preparing for graduate work in oceanography or marine sciences are advised to major in one of the basic sciences and include the courses listed below to complete an academic minor in marine sciences. Additional ocean-oriented courses are available through departmental, curriculum, and summer school offerings for students interested in marine science but not necessarily preparing for graduate study. Curriculum in Marine Sciences' faculty work with the Office of Experimental and Special Studies to provide advice on individualized, ocean-oriented educational programs outside the scope of those regularly offered by departments and curricula.

Minor in Marine Sciences

Required Courses (4)
Oceanography (MASC 101, BIOL 126, Env. Sci. 127)
Environmental Processes of the Coastal Zone (MASC 138)

One course featuring practical experience in marine science such as:

- a field course (MASC 137 or equivalent)
- a supervised special topics course (MASC 199 or equivalent)
- or a mathematics modeling course (MASC 152 or equivalent), and

A fourth marine science course of the student's choosing.

Advising for minors and approval of equivalent courses is provided by the Curriculum's coordinator of Undergraduate studies.

Marine Sciences courses available to advanced undergraduates through the Curriculum in Marine Sciences and allied departments include the following:

101 Oceanography *(Biology 126, Environmental Sciences 127, Geology 101)* (3). Prerequisites, major in a natural science or at least two college-level courses in natural sciences. The origin of ocean basins, chemistry and dynamics of seawater, biological communities and processes, the sedimentary record, and the history of oceanography. Term paper. Intended for students with college science background; other students should see Geology 12. Three lecture hours a week. Fall, Neumann; Spring, staff.

103 Geological Oceanography *(Geology 188)* (4). Prerequisite, Geology 11 or 41, or permission. Ocean basin origin, continental margin development, coastal geology, carbonate platforms and pelagic sediments are subjects covered; paleo-oceanographic reconstructions are emphasized. Field trip to coast. Three lecture and two laboratory hours a week. Fall. Neumann.

104 Biological Oceanography *(Biology 140, Environmental Sciences 136)* (4). Prerequisites, Biology 54 or 105 or permission. Physical, chemical and biological factors characterizing estuarine and marine environments emphasizing factors and controlling animal and plant populations, including methods of analysis, sampling, and identification. Five lecture and five laboratory hours a week. Summer. Staff.

105 Chemical Oceanography *(Environmental Sciences 128)* (4). Prerequisite, one semester of physical chemistry or Environmental Sciences 122 or Chemistry 180, or equivalent. Variation and abundance of sea water constituents, the chemical, physical, and biological processes contributing to their distribution as well as problems of dispersion of conservative and nonconservative substances are considered. Three lecture and two laboratory hours a week. Spring. Alperin, Martens.

114 Algae *(Biology 111)* (3). Prerequisites, Biology 11, 11L. An introduction to the development, biology, ecology, and evolutionary significance of the algae. Three lecture hours a week. Spring. Hommersand.

114L Algae Laboratory *(Biology 111L)* (2). Identification, classification, culture techniques and field experience with algae. Six laboratory hours a week. Spring. Hommersand.

122 Physical Oceanography (4). Prerequisites, Math 31, 32, Physics 24, 25, or permission. Descriptive regional oceanography, equations of motion, the Ekman layer, wind-driven currents, thermohaline circulation, modern observations, waves, tides. Four lecture hours a week. Fall. Bane.

123 Marine Carbonate Environments *(Geology 123)* (4). Prerequisite, permission of instructor. Chemical and biological origins of calcium carbonate, skeletal structure and chemomineralogy, breakdown, preservation, sedimentation, and early diagenesis are studied in a variety of deep and shallow environmental settings, in order to understand skeletal genesis, limestone origin and carbonate facies variability. Field trip to Florida, Bahamas, or Bermuda. Lab exercises; research report. Three lecture and three laboratory hours a week. Spring. (1993 and alternate years.) Neumann.

125 Coastal Sedimentary Environments *(Geology 125)* (3). Prerequisite, Geology 56 or permission of the instructor. Introduction to modern shallow-water clastic environments and their sediments, emphasizing barrier islands, deltas, wetlands, and tidal flats. Includes local field trips and discussion/application of data-collecting techniques. (1992 and alternate years). Wells.

133 Micropaleontology (3). Prerequisite, Invertebrate Paleontology 132, or Marine Ecology 146, or permission of instructor. An in-depth study of the biostratigraphy, paleoecology, and taxonomy of various microfossil groups (e.i., Foraminifera, ostracodes, conodonts, coccoliths, Radiolaria, diatoms, acritarchs, dinoflagellates, etc.) dependent upon individual student objectives. Three lecture and three laboratory hours a week. Spring. Bralower.

134 Invertebrate Development and Evolution *(Biology 134)* (3). Prerequisites, Biology 11, 11L. A survey of diversity in animal development and life cycles with emphasis on free-living marine invertebrates. Three lecture hours a week. Fall. (Alternate years.) Staff.

134L Invertebrate Development Laboratory *(Biology 134L)* (1 or 2). Prerequisite or corequisite, Biology 134. Laboratory experience in obtaining, culturing, and identifying embryonic, larval, and planktonic materials, with emphasis on free-living marine forms. Three scheduled laboratory hours a week; or, with special permission, three or more additional hours a week on an independent project for one additional unit of credit. With 134. Staff.

137 Ecology of Wetlands *(Environmental Sciences 137)* (4). Prerequisites, 1 year of Biology, 1 year of Chemistry, 1 semester of Ecology, and permission of instructor. An introduction to the functioning of freshwater and estuarine marsh and swamp ecosystems, with emphasis on systems of the southeastern U.S. Fall. Staff.

138 Environmental Processes of the Coastal Zone (4 to 6). Prerequisite, science background and permission. Analysis of processes that create and control coastal zone environments. Topic selection reflecting faculty specialization, emphasis on field study. May be taken more than once for credit. Spring semester coastal aspects of marine geology, physics, chemistry, biology and management. Summer School focuses on selected coastal habitats and processes (i.e. Barrier Island Ecology). Three lecture hours a week and two weekend field trips. Spring. Frankenberg. Lecture and laboratory hours by arrangements. Summer. Staff.

141S Special Problems in Marine Biology *(Biology 141S)* (3 to 6). Prerequisite, Biology 140 and/or permission of instructor. Survey of current problems and intellectual approaches in any of the following areas: Marine Ecology (Hay, Peterson); Marine Microbes (Kohlmeyer, Paerl). Hours and credits by prior agreement (with five or more laboratory and conference hours a week per unit credit), Fall, spring, first or second summer terms (offered on demand at Morehead City, N.C.). Staff of Institute of Marine Sciences.

145 Geochemistry *(Geology 145)* (3). Prerequisites, Geology 11 or 41, Chemistry 21, or permission of the instructor. Introduction to the application of chemical principles to geological problems, with emphasis on isotopic methods. Spring. Benninger.

146 Marine Ecology *(Biology 146)* (3). Prerequisite, Biology 54 or 105 or permission of instructor. An introductory study of oceanography as it pertains to the ecology of marine organisms. Three lecture hours a week. Spring. (1988 and alternate years). Peterson.

151 Fluid Dynamics *(Physics 151)* (3). Prerequisite, Physics 103 or permission. The physical properties of fluids, kinematics, governing equations, viscous incompressible flow, vorticity dynamics, boundary layers, irrotational incompressible flow. Three lecture hours a week. Fall. Shay, Bane.

152 Marine Systems Modeling (3). Prerequisite, Math 32 or permission of instructor. Mathematical modeling of the flow, nutrient chemistry and lower trophic levels in a marine system; mathematical modeling of sedimentary geochemical processes; the fundamental budget equation; turbulent transport; numerical techniques. Three lecture hours a week. Spring. (Alternate years.) Bane, Shay.

199 Special Topics in Marine Sciences (2 to 6). Prerequisite, science background and permission of instructor. Directed readings, laboratory, and/or field study of marine science topics not covered in regularly scheduled courses. Lecture and laboratory hours by arrangement. Fall, spring, or summer. Staff.

Curriculum in Mathematical Sciences

Ancel C. Mewborn, *Chair*

Mathematical methodology has long been the characteristic feature of such sciences as physics and chemistry and of a variety of technological and engineering disciplines. In recent years, new mathematical tools and ideas have been used in areas not previously thought to be amenable to mathematical analysis. The development of large and fast computers has been a major factor in this expansion of mathematics. Biology, medicine, psychology, anthropology, sociology, political science, business and management, and linguistics have all profited from the introduction of mathematical techniques. As a result, an undergraduate degree in the mathematical sciences provides a good basis for a career in many different areas.

The Curriculum in Mathematical Sciences offers a Bachelor of Science degree program which permits a student to major in one of the five options: Actuarial Science, Applied Mathematics, Computer Science, Operations Research, and Statistics. (The Computer Science option is directed toward the mathematical aspects of computer science - in contrast with the Computer Science option of the Curriculum in Applied Sciences, which is oriented toward the design and operation of hardware devices for digital systems.)

Each of these options represents an area of practical and theoretical interest in the Mathematical Sciences; each will prepare the major for a variety of professional jobs or for graduate study in related subjects. The advisers in this Curriculum are faculty members from the Departments of Computer Science, Mathematics, Operations Research, Physics, and Statistics. Students are assigned to appropriate advisers according to their interests.

Students interested in one of these options should see the Chair of the Curriculum in Mathematical Sciences in 358 Phillips Hall. A program leading to an Honors degree is available in each of the options. Students should consult their advisers for further information. A five-year program leading to a M.S. degree in Operations Research is also available.

General College Requirements

In the first two years all students in these programs must meet the requirements of the General College. As part of or in addition to these requirements, the following courses should be taken:

A. Mathematics 31, 32, 33, 81, 83 and Computer Science 14 or 15 (all options);

B. A foreign language through language 4 (all options);

C. Physics 26, 27 (Applied Mathematics and Computer Science options); Physics 28 (Applied Mathematics option); Physics 24, 25 or 26, 27 are recommended but not required for the other options.

D. Economics 10 (Actuarial Science and Operations Research options); Business Administration 71 (Actuarial Science option).

E. Computer Science 114 (Computer Science option).

Junior-Senior Requirements

A. Actuarial Science Option
   1. Mathematics 147, 161, 162, 166;
   2. 1 of Mathematics 121, 124;
   3. Operations Research 181; (Operations Research 183 recommended)
   4. Statistics 101, 102, 126, 127.

B. Applied Mathematics Option
   1. Mathematics 121, 124, 147, 122;
   2. 1 of Mathematics, 123, 129;
   3. Computer Science 151 or Mathematics 166;
   4. Physics 191, 192;
   5. Statistics 101, 102.

C. Computer Science Option
   1. Physics 58;
   2. Mathematics 147, 148;
   3. Statistics 126;
   4. Computer Science 120, 121;
   5. 9 additional hours from the mathematical sciences with courses chosen from:
      a. Computer Science 122, 130, 140, 142, 144, 145, 151 (or Mathematics 166), 160, 181, 190, or other computer science course approved by the major adviser;
      b. Statistics 101, 127, Operations Research 181, 183, Mathematics courses numbered above 120;
      At least 6 hours must be from group (a).

D. Operations Research Option
   1. Mathematics 121, 147;
   2. 1 of Mathematics 122, 124, 129;
   3. Statistics 101, 102, 126; (Statistics 127 recommended)
   4. Operations Research 181, 183;
   5. Computer Science 114 or 120.

E. Statistics Option
   1. Mathematics 121, 147, and 122 or 129;
   2. Statistics 101, 102, 126, 127;
   3. 1 of Statistics 104, 129, 133, 160, 171, 180, 181 or Operations Research 183;
   4. 1 of Mathematics 123, 124, 138, 148.

F. Each student is required to take five elective courses outside of the Mathematical Science Departments (Computer Science, Mathematics, Operations Research, and Statistics). Of these, at least one must be chosen from the Divisions of Humanities and Fine Arts, one from the Division of Social Sciences, and one from the Division of Basic and Applied Natural Sciences. These courses cannot be taken pass/fail.

G. Students in all options must take sufficient electives to achieve at least 122 hours of academic credit not including physical education activity courses. The student must attain a grade of C or better in 18 hours of the junior-senior course requirements.

Minor in Mathematical Sciences

The minor in Mathematical Sciences requires:

A. Mathematics 33 and either Mathematics 81 or Mathematics 83.

B. Three of the following courses, all with a grade of C or better; Mathematics 147, 157, 166 (or Computer Science 151); Computer Science 114, 120, 121, 190; Operations Research 181, 183; Statistics 101, 102, 126, 127. (Suitable substitutions may be allowed with the approval of an adviser in the program.)

Further restrictions common to minors in both programs:

C. No student majoring in either Mathematics or the Mathematical Sciences may minor in the other program.

D. A minor in either program requires the approval of an adviser in that program.

With the exception noted in C any Mathematics or Mathematical Sciences major may choose any approved minor in the College of Arts and Sciences.

Department of Mathematics

Sheldon E. Newhouse, *Chair*

Mathematics has always been a fundamental component of human thought and culture, and the growth of technology in recent times has further increased its importance. Today mathematics is an essential partner in fields where once it played no role whatever. At the same time, mathematics itself continues to grow and develop through research, much of which is stimulated by these new interactions with other fields. Today every educated person needs at least a familiarity with the language of mathematics, and even some more substantial knowledge of the technical aspects than has been the case in the past. People working in many fields find that areas of mathematics only recently thought to be sophisticated and advanced have become part of the everyday tools of their own sphere of activity.

UNC-Chapel Hill offers a variety of degrees in mathematics and the mathematical sciences, providing students a wide choice of careers in this field. Among the jobs in industry, government and the academic world which involve mathematics as a central aspect are: actuary, analyst, modeller, optimizer, statistician, computer analyst. Students who have an interest in working in one of these highly technical professions or who intend to pursue an advanced degree in one of the mathematical sciences should seriously consider the B.S. in Mathematics or one of the options in the B.S. in Mathematical Sciences.

For those interested in teaching careers, the Department of Mathematics cooperates with the School of Education in the preparation of teachers for the elementary, middle school, and high school levels. (See the note below.) Finally, the B.A. in Mathematics is a true liberal arts degree opening the door to the continuing intellectual growth, enrichment, and self-fulfillment which are the goals of a liberal education. Students intending to enter a professional school (law, medicine, business), will find that an undergraduate degree in mathematics is seen as an attractive item by the admissions officers of such schools.

Degree Requirements

Students majoring in mathematics may enter either the B.A. or the B.S. program. The B.A. program is more flexible than the B.S. program; it allows one to specialize in mathematics and at the same time either to follow a broad liberal arts program or to specialize in a second area (possibly even taking a second major). The B.S. program is more technically oriented; it provides solid preparation for work or study in mathematics or a related field.

Both the B.A. and the B.S. degrees require, beyond freshman-sophomore calculus, courses in algebra and analysis at a higher level. Students who plan a career in a technical field should also develop familiarity with computers and statistics, for example by taking COMP 14 or 15 and some of STAT 101, 102, 126, and 127.

The specific requirements (beyond those of the General College) for the B.A. and B.S. degrees are as follows.

B.A. Degree with a Major in Mathematics

A. 1. Mathematics 31, 32, 33, 81, 83
   2. Mathematics 147 or 137 (preferably before the senior year)
   3. Mathematics 121
   4. At least 3 more mathematics courses numbered 120 or above.

B. The five Perspective requirements of the College of Arts and Sciences.

C. 18 hours of C or better (not C -) in mathematics courses numbered 33 or higher.

B.S. Degree With a Major in Mathematics

A. For freshman and sophomore years see "General College."

Junior and Senior Years

B. 1. Mathematics 147 or 137 (preferably before the senior year)
2. Mathematics 121 and one of 122, 123, 128, 166
3. Mathematics 134 or138
4. At least 3 more mathematics courses numbered 120 or above.

C. Four or more courses in Division of Natural Sciences but not in Mathematics (in addition to the General College requirements).

D. Four nonscience Perspective courses (one each in the Aesthetic, Philosophical, Social Sciences and Western Historical or Non-Western Comparative Perspectives).

E. 18 hours of C or better (not C -) in mathematics courses numbered 120 or higher.

Special Programs in Mathematics: Special honors (A) sections are given in mathematics courses as often as possible when student interest is sufficient. The basic calculus sequence is offered in honors sections each year. Advanced honors sections are arranged on a less regular basis. Students interested in special sections should consult the departmental honors adviser. Promising students are encouraged to work toward a bachelor's degree with honors in mathematics.

The course program will consist of six or more courses approved by the departmental honors adviser. At some time during the semester in which he or she expects to graduate, the candidate for a degree with honors will either present an honors essay written under the direction of a faculty member or take an oral examination on courses approved by the honors adviser. Students writing an honors essay will be expected to make an oral presentation of the essay. Interested students should consult the departmental honors adviser as early as possible and in no case later than the beginning of their senior year. Special activities for qualified students include an undergraduate Mathematics Club, a scholastic honorary society Pi Mu Epsilon, and a Putnam Examination Team. Students interested in these activities should consult the departmental honors adviser.

General College Mathematics Requirement: Students may use the following mathematics courses to fulfill the General College Mathematics requirement: Math 16, 17, 18, 22, 30, 31, 32. Other courses which fulfill this requirement and exceptions involving courses with similar subject matter are described in the General College section of this bulletin. No student can receive credit for Math 16 or Math 22 or Math 30 after receiving credit for Math 31. No student can receive credit for Math 16 after receiving credit for Math 22. Math 12 cannot be used to satisfy the General College requirement.

Advanced Placement: A student who makes a grade of 3 or higher on the AB Advanced Placement Examination will receive credit for Mathematics 31. A student who makes a grade of 3 or higher on the BC Advanced Placement Examination will receive credit for both Mathematics 31 and Mathematics 32. No credit for Mathematics 30 will be given on the basis of any advanced placement examination. A credit examination for calculus is given on a regular basis by the department. Information concerning this examination may be obtained by contacting the Director of Undergraduate Studies. Any student who is placed in one of the courses Math 32 or 33 and receives a grade of C - or better in the course will be given credit (without grade) for all courses in the sequence 31 and 32 which precede the course taken.

Students in Mathematics Intending to Teach: Students intending to teach mathematics in the public schools and students enrolled in the School of Education who intend to major in mathematics should consult the appropriate section of the catalog on the School of Education or the Director of Mathematical Education in the Department of Mathematics.

Minor in Mathematics

The minor in Mathematics requires:

A. Mathematics 33, 81, and 83.

B. Three Mathematics courses numbered 120 or higher, all with a grade of C or better.

Review of Basic Algebra (3). Prerequisite, placement by Achievement Test. Placement in this course is by the Mathematics Department based on testing which indicates that the student will have difficulty with Math 10. The course provides a more gradual introduction to the material of Math 10. Hours credit for this course cannot be used for any Mathematics requirement and do not count for hours required for graduation. Fall, summer.

10 Algebra (3). Prerequisite, placement by Achievement Test. This course provides a one semester review of the basics of algebra. Basic algebraic expressions, functions, exponents, and logarithms are included with an emphasis on problem solving. The course should not be taken by those with a suitable score on the Achievement Test. Fall and spring.

12 Mathematics in the Early Childhood and Intermediate Grades *(Education 12)* (3). Prerequisite, one college level mathematics course. This course provides a study of the mathematical content of elementary programs together with materials, techniques, and aids for teaching that content. Fall and spring.

16 Intuitive Calculus (3). Prerequisite, Math 10. This course provides an introduction in a nontechnical setting as possible of the basic concepts of calculus. The course is intended for the nonscience major. A student may not receive credit for this course after receiving credit for Math 22 or Math 31. Fall and spring.

17 Finite Mathematics (3). Prerequisite, Math 10. This course provides an introduction in as nontechnical setting as possible of the basic concepts of finite mathematics. Basic counting problems and finite probability problems are discussed. The course is intended for the nonscience major. Fall and spring.

18 Selected Topics in Mathematics (3). Prerequisite, Math 10. This course provides an introduction in as nontechnical setting as possible to selected topics in mathematics. Topics covered will vary each semester depending on the individual instructor's selection. The course is intended for the nonscience major. Fall and spring.

22 Calculus for Business and Social Sciences (3). Prerequisite, Math 10. An introductory survey of differential and integral calculus with emphasis on techniques and applications of interest for business and the social sciences. This is a terminal course and not an adequate preparation for Math 32. A student cannot receive credit for this course after receiving credit for Math 31. Fall and spring.

30 Trigonometry and Analytic Geometry (3). Prerequisite, Math 10. Covers the basic concepts of trigonometry and analytic geometry. Covered are the trigonometric functions and their graphs, relationships, and applications. Basic analytic geometry topics include the conics, translations, and rotations. Basic ideas of vector geometry are introduced. A student may not receive credit for this course after receiving credit for Math 31. Fall and spring.

31 Calculus of Functions of One Variable I (3). Prerequisite, a grade of C- or better in Math 30 or placement by the Department. Limits, derivatives, and integrals of functions of one variable. Fall and spring.

32 Calculus of Functions of One Variable II (3). Prerequisite, a grade of C- or better in Math 31 or placement by the Department. Calculus of the elementary transcendental functions, techniques of integration, indeterminate forms, Taylor's formula, infinite series. Fall and spring.

31A, 32A Calculus of Functions of One Variable I and II (3 each). Prerequisite, special placement by examination or consent of instructor. These are the honors sections of Math 31, 32. A more comprehensive, deeper treatment of differential and integral calculus and infinite series. 31A Fall; 32A Spring and fall.

33 Calculus of Functions of Several Variables (3). Prerequisite, Math 32. **Calculus of Functions of Several Variables** (3). Prerequisite, Math 32. Vector algebra, solid analytic geometry, partial derivatives, multiple integrals. Fall and spring.

33A Calculus of Functions of Several Variables (3). Prerequisite, Math 32A or consent of instructor. Continues the A-sequence with linear algebra for applications, multivariable differential calculus, maxima and minima, curves in space. Fall.

81 Discrete Mathematics (3). Prerequisite, Math 32. Topics from the foundations of mathematics; logic, set theory, relations and functions, induction, permutations and combinations, recurrence. Fall and spring.

83 Linear Algebra and Differential Equations (3). Prerequisite, Math 33. Systems of linear equations; vectors and matrices; basis and independence. Introductory ordinary differential equations; systems of linear differential equations. Fall and spring.

83A Linear Algebra and Differential Equations (3). The honors sections of Math 83. Fall and spring.

90 Undergraduate Reading and Research in Mathematics (1 - 3). Permission of Director of Undergraduate Studies required. This course is intended mainly for students working on honors projects. No one may receive more than 3 semester hours credit for this course. Fall and spring.

98 Undergraduate Seminar in Mathematics (1 - 3). Prerequisite, permission of the instructor. A seminar on a chosen topic in mathematics in which the students participate more actively than in usual courses. Fall and spring.

101 Mathematical Concepts in Art (3). Prerequisite, Art 37. Mathematical theories of proportion, perspective (projective invariants and the mathematics of visual perception), symmetry and aesthetics will be expounded and illustrated by examples from painting, architecture and sculpture.

106 Mathematical Methods in Biostatistics *(Bios 106)* (3). Prerequisite, Math 32 or equivalent. Special mathematical techniques in the theory and methods of biostatistics as related to the life sciences and public health. Includes brief review of calculus, selected topics from intermediate calculus, and introductory matrix theory for applications in biostatistics.

108 Mathematical Methods for the Physical Sciences I (3). Prerequisites, Math 83 and Physics 24 - 25, or equivalent. Ordinary differential equations; Laplace transform. Matrices and determinants. Students taking Math 108 or Math 129 will be expected to do some numerical calculations on either a programmable pocket calculator or a computer. Fall.

111 Developing Mathematical Concepts (3). Prerequisite, consent of instructor. An investigation of various ways elementary concepts in mathematics can be developed. Applications of the mathematics developed will be considered. This course ordinarily is offered as an inservice course for teachers.

115 History of Mathematics (3). Prerequisites, calculus and abstract algebra; graduate students by permission only. A brief general survey of the history of mathematics. Some special problems in depth. Problems in the history of mathematics.

116 Linear Algebra (3). Prerequisite, Math 32. An introduction to the theory of vector spaces, linear transformations, systems of linear equations, matrices, determinants, eigenvectors, diagonalization. A student may not receive credit for this course after receiving credit for Math 147 or 137.

118 Basic Concepts of Analysis (3). Prerequisites, Math 32 and consent of instructor. Limits, continuity, differentiability, uniform continuity. Riemann integration. Infinite sequences and series; uniform convergence; power series. A student cannot receive credit for this course after receiving credit for Math 193 or Math 121.

120 Probability (3). Prerequisites, Math 33 and Math 81. Foundations of probability; random variables and distribution functions; the binomial, Poisson, and normal distributions; expectations, moments, moment- generating functions; compound events and joint distributions; limit theorems; applications. A student cannot receive credit for this course after receiving credit for Math 146. Spring.

121 Advanced Calculus I (3). Prerequisites, Math 33 and Math 81. The real numbers; continuity and differentiability of functions of one variable; infinite series; integration. Fall and spring.

122 Advanced Calculus II (3). Prerequisite, Math 121. Functions of several variables; the derivative as a linear transformation; inverse and implicit function theorems; multiple integration. Spring.

123 Functions of a Complex Variable with Applications (3). Prerequisite, Math 83. The algebra of complex numbers, elementary functions and their mapping properties, complex limits, power series, analytic functions, contour integrals, Cauchy's theorem and formulae, Laurent series and residue calculus, elementary conformal mapping and boundary value problems, Poisson integral formula for the disk and the half plane. Fall.

124 Elementary Differential Equations (3). Prerequisite, Math 83. Introduction to ordinary differential equations, linear differential systems, power series solutions, Laplace transforms, numerical methods. Fall and spring.

129 Mathematical Methods for the Physical Sciences II (3). Prerequisites, Physics 24 - 25, and one of Math 121, 124, 108 or equivalents. Partial differential equations. Beseel and Legendre functions, orthogonal expansions, Fourier series and integrals. Spring.

130 Topology (3). Prerequisite, Math 33; corequisite, Math 83 or permission of instructor. Introduction to topics in topology, particularly surface topology, including classification of compact surfaces, Euler characteristic, orientability, vector fields on surfaces, tesselations, and fundamental group. Research problems discussed at elementary level. Fall, spring. Goodman, Stasheff.

131 Euclidean and Non-Euclidean Geometries (3). Prerequisite, Math 32 or permission of instructor. Critical study of basic notions and models of Euclidean and non-Euclidean geometries, order, congruence and distance. Spring.

133 Elementary Theory of Numbers (3). Prerequisite, Math 81. Divisibility, Euclidean algorithm, congruences, residue classes, Euler's function, primitive roots, Chinese remainder theorem, quadratic residues, number theoretic functions, Farey and continued fractions, Gaussian integers. Spring.

134 Elements of Modern Algebra (3). Prerequisite, Math 81. Binary operations, groups, subgroups, cosets, quotient groups, rings, polynomials. Fall.

135 Number and Magnitude (3). Prerequisite, one year of college mathematics or consent of instructor. A historically oriented and mathematically rigorous development of the following topics: natural numbers, counting, arithmetic, magnitude, classical ratio and proportionality, positive, negative, rational and real numbers.

136 Algebra and Number (3). Prerequisite, Math 134 or 135 or 137 or 138 or consent of instructor. A historically oriented, rigorous development of polynomial algebra: solution of equations, solvability, Intermediate Value Theorem, Fundamental Theorem of Algebra, theorems of Gauss, Abel and Galois, various notions of real number.

137 Linear Algebra (3). Prerequisites, Math 81 and Math 83. Vector spaces, linear transformations, duality, diagonalization, primary and cyclic decomposition, Jordan canonical form, inner product spaces, orthogonal reduction of symmetric matrices, spectral theorem, bilinear forms, multi-linear functions. A much more abstract course than Math 116 or 147. Fall.

138 Algebraic Structures (3). Prerequisite, Math 137 or 147. Permutation groups, matrix groups, groups of linear transformations, symmetry groups; finite abelian groups; residue class rings, algebra of matrices, linear maps, and polynomials; real and complex numbers, rational functions, quadratic fields, finite fields. Spring.

146 Introduction to Probability *(Statistics 126)* (3). See course listings for Department of Statistics.

147 Matrix Theory (3). Prerequisite, Math 83 or equivalent. Algebra of matrices with applications; determinants; solution of linear systems by Gaussian elimination; Gram-Schmidt procedure; eigenvalues; linear programming. Math 116 covers elementary aspects of linear systems and matrices and may not be taken for credit after credit has been granted for Math 147. Fall and spring.

148 Combinatorial Mathematics *(Statistics 156)* (3). Prerequisite, Math 81 or equivalent, or permission of the instructor. Topics chosen from: generating functions, Polya's theory of counting, partial orderings and incidence algebras, principle of inclusion- exclusion, Moebius inversion, combinatorial problems in physics and other branches of science. Fall.

149 Introduction to Graph Theory *(Statistics 158)* (3). Prerequisite, Math 116, 137, or 147. Basic concepts of directed and undirected graphs, partitions and distances in graphs. Planar and nonplanar graphs. Matrix representation of graphs, network flows, applications of graph theory.

151 Deterministic Models in Operations Research *(Statistics 181, OR 181)* (3). See course listings for Department of Statistics.

152 Nonlinear and Discrete Optimization *(OR 182)* (3). See course listings for Department of Operations Research.

157 Topics in Matrix Theory (3). Prerequisites, Math 137 or equivalent, or Math 147 or equivalent, and some knowledge of computer programming. Quadratic and Hermitian forms, Sylvester's theorem; applications to systems of differential equations; approximation of eigenvalues and eigenvectors; nonnegative matrices. Perron-Frobenius theorem; integer matrices with applications in combinatorics. Spring.

161 Actuarial Mathematics I (3). Prerequisite, Math 33. An introduction to the basic mathematical models of actuarial science. Deterministic and simple stochastic models of compound interest and life contingency theory are studied. Spring.

162 Actuarial Mathematics II (3). Prerequisites, Math 161 and Stat 126. The theory introduced in Actuarial Mathematics I is expanded to encompass more complex models of financial transactions and risks. Spring.

166 Introduction to Numerical Analysis (3). Prerequisites, Math 83 and some knowledge of computer programming. Iterative methods, interpolation, polynomial and spline approximations, numerical differentiation and integration, numerical solution of ordinary and partial differential equations. The subject matter of this course will include the material covered in the Society of Actuaries examination on numerical methods. Fall.

171 Numerical Computing *(COMP 151)* (3). See course listings for Department of Computer Science.

172 Mathematical Analysis in Numerical Computing *(COMP 152)* (3). See course listings for Department of Computer Science.

174 The Finite Element Method (3). Prerequisites, intermediate calculus and ordinary differential equations. Finite difference methods, Hermite interpolation, splines, variational methods, applications to boundary value problems associated with ordinary and partial differential equations.

175 Topics in Analysis (3). Prerequisites, Math 122 or consent of instructor. Topics may include linear spaces, convexity, mathematical programming, duality, algorithms, and other subjects related to the mathematical theory of optimization. Spring.

176 Topics in Algebra (3). Prerequisite, consent of instructor. Topics may include number theory, algebraic number theory, field theory, or algebraic geometry. Spring.

177 Topics in Geometry (3). Prerequisite, consent of instructor. Topics may include non-Euclidean geometries, linear geometry, finite geometries, convexity, polytopes, topology, and algebraic geometry. Spring.

180 Geometry of Curves and Surfaces (3). Prerequisite, advanced calculus. Topics include: (curves) Frenet formulas, isoperimetric inequality, theorems of Crofton, Fenchel, Fary-Milnor; (surfaces) fundamental forms, Gaussian and mean curvature, special surfaces, geodesics, Gauss-Bonnet theorem. Fall.

181 Introductory Topology (3). Prerequisites, Math 193 and 186 or permission of instructor. Topological spaces, connectedness, separation axioms, product spaces, extension theorems. Classification of surfaces, fundamental group and covering spaces. Spring.

185 Algebraic Logic I *(Philosophy 185)* (3). Prerequisite, Math 138 or Phil 101. Basic concepts in logic treated as a branch of mathematics. Topics may include: Boolean algebras, polyadic algebras, cylindric algebras, 185 Algebraic Logic I (Philosophy 185) (3). Prerequisite, Math 138 or Phil 101. Basic concepts in logic treated as a branch of mathematics. Topics may include: Boolean algebras, polyadic algebras, cylindric algebras, ultraproducts. Spring.

186 Linear Algebra (3). Corequisite, Math 138 or permission of instructor. Vector spaces, linear maps, determinants; commutative rings, algebras, polynomials; structure of operators; inner products. Fall.

190 Combinatorial Theory (3). Corequisite, Math 186 or permission of instructor. Foundations of combinatorial mathematics; partial orders, lattices, Moebius and incidence algebras, matching theory, Ramsey's theorem, permutation representations and Polya's theory of counting. Spring.

191 & 192 Introduction to Applied and Computational Mathematics I and II (3 each). Prerequisites, linear algebra, advanced calculus and knowledge of a computer language appropriate for mathematical programming. 191 is a prerequisite for 192. Basic mathematical concepts and computational procedures used in modelling and solving problems from science and engineering. Topics include equilibrium problems, approximation methods, numerical solution of differential equations, and numerical analysis.

193 Introductory Analysis (3). Prerequisite, advanced calculus. Elementary metric space topology; continuous functions; differentiation of vector-valued functions; implicit, inverse function theorem. Topics from: Weierstrass theorem; existence and uniqueness theorems for differential equations; series of functions. Fall.

195 Intermediate Probability *(Statistics 132)* (3). See course listings for Department of Statistics.

196 Complex Analysis (3). Prerequisite, Math 193. A rigorous treatment of complex integration, including the Cauchy theory. Elementary special functions, power series, local behavior of analytic functions. Spring.

197 Qualitative Theory of Differential Equations (3). Prerequisite, linear algebra and Math 193, or consent of instructor. Existence and uniqueness theorems, linear and nonlinear systems, differential equations in the plane and on surfaces, Poincare-Bendixson Theory, Liapouonov stability and structural stability, critical point analysis. Spring.

Department of Music

Ann M. Woodward, *Chair*

The Department of Music offers three curricula for undergraduates who major in music. The Bachelor of Arts provides a broad education in the liberal arts either with a more general training in music theory, music history and literature, and performance or with a concentration in music history consistent with majors in the other humanities. The Bachelor of Music degree puts emphasis on training in music performance or composition, backed by music theory, and history and literature, and balanced by as rich an experience in the liberal arts as the program will allow. The Bachelor of Music Education degree, administered through the School of Education, emphasizes music teaching and qualifies the student for the North Carolina Class A teaching certificate while also providing the requisite background in music theory, history and literature, and performance.

All three curricula include a basic core (25 hours) of music theory and history and literature courses (Music 31, 32, 37, 38, 51, 52, 52X, 53, 53X, and 54). In addition, the general B.A. requires Music 36a and 36b, Music 65, and two electives; the B.A. with a concentration in music history, five music electives (15 hours) with one additional music theory course (e.g., Music 64, 65) recommended, one 80-level elective consistent with the list of electives prepared each year; two electives at the 90- level or above (an honors paper might fulfill this requirement); and one additional music elective; the B.M., Music 36a and 36b, Music 65 and four electives; and the B.M.Ed., Music 36a and 36b, Music 67, 68, 73, 78, and vocal and instrumental techniques classes - voice, strings, piano, woodwinds, brass, and percussion (14 additional hours).

Each curriculum, except the B.A. in music history, also requires that students be involved in performance throughout all or most of their undergraduate residency, both through private instruction and practice and through participation in ensembles; in the B.A. in music history, it is strongly recommended that students continue their performing activities, and students may be advised to pursue further study of performance as their earlier experience may suggest, but credits earned in performance will not count as music electives.

Moreover, each curriculum includes General Education courses in Basic Skills and Perspectives, as outlined elsewhere in this catalog. Prospective music majors normally defer enough General College courses to permit them to begin major courses in the freshman and sophomore years.

Except for students in the B.A. in music history, the music requirements and credits are the same for each potential major in the normal freshman and sophomore years (Music 31, 32, 36a, 37, 36b, 38, and 51, plus four semesters of private instruction for two credits each and four semesters of large ensemble), but differences begin with the junior year. Although decisions in some cases can be made later without great penalty, students normally choose, in consultation with appropriate faculty, one of the programs before the end of the sophomore year. Students in the B.A. in music history may begin their course of study in either the freshman or sophomore year (Music 31 and 32).

The B.M. degree requires, among the curricula, the highest standards in performance or composition and accordingly offers the most credits for applied music (from the junior year, for the performance major, 3 credits for private instruction each semester; for the composition major, 3 credits for composition and related courses). The degree includes fewer courses outside of the major (fifty-eight hours plus physical education).

The B.M. Ed. degree offers fewer credits in applied music (2 credits for private instruction each semester), but includes professional education courses (Educ. 45, 54, 55/56, 57, 72, 74, 75/76, 77/78/79 (Student Teaching), 153, as well as at least twelve courses exclusive of music and education courses.

The general B.A. degree offers fewest credits in applied music (from the junior year, 1 credit for private instruction each semester), but provides a rich experience in the liberal arts and sciences (seventy-six hours plus physical education).

The B.A. degree in music history offers no credits in applied music, but it provides the richest academic

experience in the liberal arts and sciences (eighty-two hours plus physical education) and music theory and music history and literature (forty hours).

Sample detailed four-year programs for all three degrees may be requested from the Music Department.

Honors in Music: Students interested in becoming candidates for a degree with honors in music should read the regulations governing the Honors Program in the College of Arts and Sciences and should consult the Honors Adviser of the Department early in the junior year. Note, also, the Freshman and Sophomore Honors Program, as explained elsewhere in this bulletin.

Minor in Music History and Music Theory

Prerequisite: Music 31

Required courses: Music 32, two courses from the 51 - 54 sequence, and two electives from the following:

Music 37, 38, the remaining two courses from the 51 - 54 sequence, 64, 65, 95, 104, 161, or any 100- level course in music history (permission of the instructor needed for 64, 65, and 100-level courses).

Applied study and participation in performance activities are recommended but not required. Performance credits do not count toward the minor.

Lecture Courses in Music

18X Listening: 1550 - 1750 (0.5). Prerequisite for Music 52. Guided listening to music written between 1550 and 1750. Laboratories one and one-half hours weekly. Two examinations. Fall.

19X Listening: 1750 - 1875 (0.5). Prerequisite for Music 53. Guided listening to music written between 1750 and 1875. Laboratories one and one-half hours weekly. Two examinations.

20 Fundamentals of Music for Classroom Teachers (3). Not offered to music majors. Rudimentary theory and ear training, melody harmonization, keyboard and other instrumental facility, ensemble arranging. Incorporates latest trends of public school music in the curriculum. Whitaker.

21 Fundamentals of Music I (3). Notational and theoretical materials of music, with singing and keyboard skills developed. Intended for the nonmajor who wishes to learn to express musical ideas in clear, correct notational form. Fall and spring. Glassock, Kremer, Whang, Wissick, and staff.

22 Fundamentals of Music II (3). Not offered to music majors. Prerequisite, Music 21 or the equivalent. A continuation of Music 21 with the addition of basic instrumentation and arranging. Fall and spring. Staff. 27 Honors 27, Seminar in the Fine Arts (3). Topics are announced. For nonmusic honors candidates; music majors admitted by permission of the instructor. Staff.

31 Theory-Musicianship I (3). An intensive introduction to the fundamentals of diatonic harmonies and melody. Techniques of harmonization, analysis, and part-writing as well as appropriate keyboard and sight-singing skills will be developed. For non- majors by permission. Fall. Arauco, Green, Warburton.

32 Theory-Musicianship II (3). Prerequisite, Music 31. A continuation of Music 31, with special emphasis on chorale style, chromatic harmony, and modulation. Dictation is added to keyboard and sight-singing skills from Music 31. Spring, Arauco, Green, Warburton.

36X Introduction to Keyboard Skills (1). A systematic approach to the keyboard through the acquisition of fundamental skills. Required for music majors who have had no formal keyboard training.

36A Keyboard Skills I (1). Application of music theory to keyboard techniques in playing harmonic progressions, in harmonizing melodies, and in realizing figured bass. Required for music majors. Spring. Miles, Rowan, Whang.

36B Keyboard Skills II (1). Prerequisite, Music 36A. Music 36B continues the development of keyboard skills established in Music 36A. Required for music majors. Fall. Miles, Rowan, Whang.

37 Theory-Musicianship III (3). Prerequisite, Music 32 with a grade of C or better. Analysis of music of the 18th and 19th centuries, with written exercises to be related to the works analysed. Continuation of keyboard, sight-singing, and dictation, related to the music studied. Fall, Arauco, Grcen, Warburton.

38 Theory-Musicianship IV (3). Prerequisite, Music 37. The course proceeds in the manner of Music 37, but it discusses the music of the 20th century. Spring. Arauco, Green, Warburton.

40 The Language of Music (3). Not offered to music majors. Introduction to the language of music. Students develop skills of score reading, vocabulary for communicating about music, discriminating listening habits and study several significant complete compositions. Reading knowledge of music desirable. Fall and spring. McKinnon, Nádas, Woodward.

41 Survey of Western Music History (3). Students will study the history of style in Western Classical music from roughly 1500 to the present. Text comes with supporting tapes. Three papers on selected complete pieces. Fall, spring, summer. Finson, Andrews, McKinnon. (GC level Aesthetic/Fine Arts Perspective.)

42 Masterpieces of Music (3). Not for music majors. One major work of Western art music will be heard and discussed each week. Music vocabulary and background will be developed appropriate to comprehending each work. Fall and spring. Andrews, Finson, Haar, Kremer, McKinnon.

45 Introduction to Jazz (3). No prerequisite. An introduction to musical materials and the development of discriminating listening habits in conjunction with the study of the origins and the major stylistic developments of jazz, as well as its historical and cultural context. Fall and spring. Jackson, Ketch, Smith.

46 Introduction to the Study of World Music (3). The study of music as a component of culture. Survey of selected music cultures including Native American, Northern Indian, Australian Aborigine, Ghanian, and black and white influences in modern popular music. Goertzen.

51 Studies in Early Music, to 1550 (3). Music in its historical context and the developing musical language from the 6th century through 1550. Works by Landini, Dufay, Josquin, and others. Written papers and listening from a repertory list. Spring. Haar, Nadas.

52 Studies in Music History, 1550 - 1750 (3). Prequisite, Music 18X. Topics include late- Renaissance polyphony, early opera, concerto, late- Baroque synthesis. Music by Palestrina, Monteverdi, Schuetz, Bach, and Handel. Fall. McKinnon, Schulenberg.

53 Studies in Music History, 1750 - 1875 (3). Topics include Classicism, instrumental forms, opera, song, Romanticism, nationalism, and Wagnerism. Music by Mozart, Beethoven, Schumann, Liszt, Wagner, and Brahms. Spring. Andrews, Bonds, Finson.

53X Listening: Music History, 1750 - 1875 (0.5). Corequisite or prerequisite for Music 53. One and one-half hours of listening laboratory per week. Spring.

54 Studies in Music History, 1875 - present (3). Topics include the crisis in tonality, the second Viennese school, neoclassicism, music after World War II. Music by Mahler, Debussy, Schoenberg, Stravinsky, and Bartok. Fall. Arauco, Hannay, Warburton.

60, 61, 62 Diction for Singers I, II, III (1 each). Basic principles of diction for singers in English/Italian, German, and French. Introduction to diction through the use of International Phonetic Alphabet, which is presented first in the English/Italian course. Fall and spring. Milholin, Rhodes, Wing.

63 Jazz Improvisation (3). Prerequisites, Music 36, 38. Development of skills in jazz improvisation in a variety of styles. Instructor's permission required. Ketch.

64 Classical Form (3). Prerequisite, Music 38. The analysis and writing of forms in imitation of the Classical style. Spring. Green.

65 Counterpoint (3). Prerequisite, Music 38. The study of two-, three- and four-part counterpoint either in the style of Palestrina, the style of Bach, or twentieth-century idioms to be designated according to need. Fall. Arauco, Haar.

66 Introduction to Composition (3). Prerequisite, Music 38. The study of compositional techniques and the development of individual creative styles through imitative and original writing. May be repeated for credit. Fall and spring. Hannay.

67 Instrumentation (3). Practical exercises in scoring and arranging for various combinations from single instrumental choirs to full concert orchestra, with trial group performances. Fall. Jackson, Wissick.

68 Conducting (2). Basic conducting techniques, score reading, and music performance evaluation for choral and instrumental groups. Spring. Glassock, Kalam.

70, 71 Piano Pedagogy I and II (3 each). Prerequisite, 2 years of piano instruction at the college level. I: Problems, materials, and methods in teaching beginning piano to children. II: Problems, materials, and methods in teaching piano to older students of high school and early college age. (Primarily for B.M. and B.M.Ed. candidates.) Fall and spring. (Alternate years.) Miles.

72, 73 Keyboard Skills: Music Education (1 each). Prerequisite, Music 36B. Development of skills in harmonization, improvisation, and transposition, especially for music education students. Fall and spring. Staff.

78 Conducting Practicum (2). Prerequisite, Music 68. Continued study of conducting techniques, score reading, rehearsal techniques and procedures. Practical experience working with UNC student ensembles. Fall. Huff, Kalam.

NOTE: The following courses come under the School of Education:

Education 75 Methods and Materials in Teaching Instrumental Music (3). Spring. Whitaker.

Education 76 Methods and Materials in Teaching Choral and General Music (3). Spring. Huff.

Education 75 and 76 meet six hours per week during the first half of the semester. As a part of the professional "block" program they are open only to seniors who are candidates for the B.M.Ed. degree.

Education 78 Student Teaching in Instrumental Music (6). Spring. Whitaker.

Education 79 Student Teaching in Choral and General Music (6). Spring. Huff.

Education 78 and 79 provide essential experience in both the musical and the administrative problems of the school music teacher and occupy the full time of the student during the second half of the second semester. Student teaching is supervised by both the School of Education and the Department of Music in selected public schools.

80 Masters of Jazz (3). Prerequisites, 21, 31, or 45. The music of Armstrong, Ellington, Parker, Davis, and Coltrane. Technical, historical, and social issues are examined through score and transcription study, readings, guided listenings, lectures, discussions, videos, and performances. Spring. Ketch.

81 History of American Popular Song (3). Nonmajors only. Changing societal mores and the blending of immigrant cultures are viewed through the medium of American Popular Song from roughly 1750 - 1960. Fall or spring. Finson.

82 Bach and Handel (3). The culmination of Baroque music, emphasizing Bach's cantatas, concertos, organ music and instrumental music, and Handel's oratorios and operas in their cultural contexts. Fall or spring. Kremer, McKinnon, Schulenberg.

83 Haydn and Mozart (3). The high point in Viennese music of the late 18th century, emphasizing Haydn's symphonies and quartets and Mozart's operas and piano concertos. Fall or spring. Andrews, Bonds, Haar.

84 Beethoven and his Era. Beethoven's music will be studied in the context of social structures and concepts about artists during Beethoven's lifetime. Fall or spring. Harr, Finson.

85 Musical Modernism. Lectures will emphasize audible features evident in the work of diverse composers characteristic of modern style. Relationships to art and popular music will be considered. Fall or spring. Arauco, Warburton.

86 Black and White American Music (3). How African- and European-derived elements have mixed to form the principal genres of American folk music. Spring. Goertzen.

87 Music in the Theatre (3). An introduction to music in its relationship to drama, especially the development of opera and related genres. Study of selected works from different periods and styles. Andrews, Rhodes.

88 The Orchestra and Its Music (3). Nonmajors only. Study of the symphony orchestra, its instruments, its historical development from the mid- eighteenth century to the present, and the music it plays, including selected works of a variety of styles. Andrews, Wissick.

89 Studies in Music Literature (3). More intensive study of a selected body of music literature. Topics, to be announced in advance of each semester's offerings, might include: Twentieth-Century Music, the String Quartet, Romantic Opera, and others according to demand and faculty availability. Staff.

90 Senior Seminar (3). For music majors. Topics vary: a composer, a genre, or specific music of an era. Historical, theoretical, or performance problems in the music selected for study. Oral presentations, term paper. Staff.

95 Studies in Jazz History (3). For music majors; others by instructor's permission. Emphasis on selected jazz styles, influences, and history. Critical listening, readings, discussion. Ketch.

98 Special Studies for Undergraduates (3). Intensive study on a particular topic under the supervision of a qualified member of the staff. For music majors, with special permission of the department. Fall and spring. Staff.

99 Honors Project in Music (3). The completion of a special project, approved by the department, by a student who has been designated a candidate for undergraduate honors. Fall and spring. Staff.

101 Resources and Methods of Musicology (3). Introduction to the scope, methodology, and bibliography of musicology. Extensive use of music library, preparation for advanced seminars, and sound research procedures are stressed. Fall. Bonds, Nádas.

102 Survey of Musical Scores (3). Survey of the chief styles of music history with emphasis on methods of analysis, examination of representative scores, written exercises, and related readings. Warburton.

103 Introduction to Asian Music (3). A survey of the traditional and folk music of the major civilizations and the island cultures of Asia. Methods, resources, and philosophies of ethnomusicology will also be considered.

104 Folk Music of Europe and the New World (3). A study of folk music in European countries, emphasizing similarities in the British Isles and southern United States.

110 Advanced Musicianship I (3). Advanced study in sight-singing (including techniques related to solege, reading in clefs), dictation and keyboard (including figured bass, harmonization, improvisation, and score reading). Fall and spring. Arauco, Kremer, Schulenberg, Warburton.

111 Advanced Musicianship II (1.5). Prerequisite, Music 110 or equivalent. Continued advanced study in musicianship skills, including score reading at the keyboard, clefs and transpositions, dictation, rhythmic and ear training. Fall. Kalam.

112 Advanced Musicianship III (1.5). Prerequisite, Music 111. Further advanced study in musicianship skills, including score reading, dictation and ear training. Emphasis will also be placed on approaches to score analysis and performance. Spring. Kalam.

114 20th-Century Harmonic Techniques (3). Prerequisite, Music 38. Hannay.

121 Women in Opera *(WMST 121)* (3). An examination and exploration of women's changing roles, onstage and behind the scenes, in the 400-year history of opera; the influence of women on the course of opera. Rhodes.

132 Folk and Popular Music of Latin America *(FOLK 103)* (3). Folk and popular music of Latin America in cultural context, emphasizing Mexican song traditions, music of Andean highland Indians, and West African-derived genres. Music literacy not a prerequisite. Spring. Goertzen.

133 Folk, Popular and Art Music in 19th-Century America *(FOLK 107)* (3). How identities of and changes in selected genres of folk, popular, and art music illustrate social, racial, and economic aspects of 19th-century America. Music literacy not a prerequisite. Fall. Goertzen.

134 Music in 20th-Century American Culture (3). How technological, societal, and aesthetic factors shaped American folk and popular music (and to a lesser degree art music) in the age of mechanical reproduction. Music literacy not a prerequisite. Spring. Goertzen.

135 American Music (3). Its growth and development from the early colonies to the present. Warburton.

136 Performances Practices (3). Problems of rhythm, ornamentation, articulation, and expression in both instrumental and vocal music, with emphasis on the period from 1550 - 1825 and practical applications in an informal collegium musicum. Luby, Schulenberg, Bonds.

140 Oratorio (3). Study of the development of the genre from its origin to the present, with emphasis on the seventeenth and eighteenth centuries, the period of its most active cultivation.

141 The Madrigal (3). Its international flowering especially at the peak of music's Renaissance Era. Haar.

142 Opera (3). A survey of the types, national and international trends, conflicts, and chief masterworks from opera's beginning around 1600 to the present. Andrews, Finson, Nadas.

144 Art Song (3). A study of the development of this genre, especially during its great flowering in the Lieder, mélodies, and other national types of the nineteenth century. Zenge.

147 The Symphony (3). The growth of the symphony as an independent orchestral genre, especially in the masterworks from the mid-18th century to the present. Andrews.

148 Keyboard Music (3). A historical survey that follows either stringed keyboard music through the harpischord, clavichord, and piano, or organ music in its successive stages. Zenge.

149 Genre Studies (3). Other specific surveys of genres, forms, and styles of music in keeping with Music 140 - 148. Staff.

150 Franz Joseph Haydn (3). The man and his times, his music and its styles. Andrews, Bonds.

151 J.S. Bach (3). With special attention alternately to the vocal and the instrumental works. Kremer, Schulenberg.

152 Mozart (3). Andrews, Haar.

153 Beethoven (3).

154 Handel (3).

155 Brahms (3).

156 Wagner and Verdi (3).

157 Debussy and Ravel (3). Warburton.

158 Stravinsky and Schoenberg (3). Hannay, Schulenberg.

159 Composer Studies (3). Other specific surveys in keeping with 150 - 158.

160 Pedagogy of Theory (3). Prerequisite, Music 38, or permission of the instructor. Techniques of teaching: evaluation of current books, scores and anthologies covering all aspects of sight-singing, keyboard, analysis, and written approaches to harmony and counterpoint. Practical classroom experience. Hannay.

161 Structural and Stylistic Analysis (3). Studies in the problems and techniques of musical analysis. Arauco, Green, Warburton.

162 Orchestration (3). Practical orchestral scoring with emphasis on understanding and imitating historical styles for Mozart through Ravel. Fall. Hannay.

163 Instrumental Arranging (3). Exercises in arranging for various combinations of woodwind, brass, and percussion instruments, with practical application.

164 Choral Arranging (3). Theory and practice of arranging music for voice in all standard choral combinations with emphasis on historical traditions and stylistic differences.

165 Survey of Contrapuntal Techniques (3). Renaissance, Baroque, and early 20th century; analysis and imitative writing. Haar, Warburton.

166 Composition (3). Prerequisite, Music 66. Original compositions in various forms. May be repeated for credit by composition majors. Fall and spring. Hannay.

167 The Electronic Studio (3). Limited to majors in the Division of Fine Arts, with permission of the instructor. An introduction to the technical aspects of electronic music, including familiarization with synthesizers. Hannay.

168 Basso Continuo (3). Practical and historical studies in styles of keyboard realizations of basso continuo. Development of keyboard skill.

171 Instrumental Performance Repertoire (3). Survey of solo and ensemble literature. Emphasis may vary among brass, percussion, strings, woodwinds.

172 Lieder Practicum (3). Analysis and performance study of German art song with emphasis on textual factors and accompanying skills. Permission of instructor required. Zenge.

173 Opera Direction Practicum (3). Practical experience in opera direction.

174 Church Music Practicum (3). Practical study of church music; church year, hymnody, chant, Roman, Anglican, Protestant services, organ improvisation, and related problems. Kremer.

175, 176 Advanced Conducting I and II (3 each). Prerequisite, Music 78. Fall and spring. Kalam, Klebanow.

NOTE: The following courses come under the School of Education.

EDCI 186 Music in the Public Schools, K - 12 (3). Spring. A study of the goals, historical development, and present curricular practices in music education at all levels. Huff.

EDCI 287 Investigations and Trends in Music Education (3). Spring. Huff.

Applied Music Requirements and Credits

All study of applied music in the Department of Music, both individual and group, has a fourfold purpose: (1) full training in the skills and techniques of the particular instrument or voice, (2) broad exploration into its literature, (3) application of principles and stylistic approaches introduced in the theory and history courses, (4) varied experience in public performance. However, the system of applied music credits differs with each curriculum, in keeping with different requirements, emphases and standards.

Class instruction in applied music for non majors will be given as the demand warrants, with one and one- half hours of class instruction weekly, plus daily practice. One hour credit is given for each semester. One hour per week of individual instruction throughout a semester earns one semester hour credit for nonmusic majors, music majors in an area which is not the student's main performance medium, and A.B. music majors beginning with the junior year. One hour per week of individual instruction in the main performance medium earns two semester hour credits for all music majors in the freshman and sophomore years, and for B.M. Ed. majors throughout their undergraduate study. (B.M. Ed. majors do not usually take private instruction in the last semester of the senior year when practice teaching.) One hour per week of individual instruction in the main performance medium earns three semester hour credits for B.M. majors beginning with the junior year. B.M. majors must give both junior and senior recitals. One-half hour per week of individual instruction is possible for nonmajors and for music majors in a minor performance medium and earns one-half semester hour credit.

The appropriateness of any student's study at a particular level is determined by audition before or at the time of enrollment and by jury examination at the end of the term. Every freshman music major and all nonmusic major students will enroll for individual instruction with credit under Music 1 - 6. To continue as a music major beyond the freshman year, a grade of "C" or better is required in the last freshman semester. After the first year, music majors will enroll under Music 11 - 16.

B.M. candidates must enroll throughout their undergraduate residency for at least one hour per week of individual instruction in the main performance medium. B.A. candidates must so enroll for at least four semesters of major level work after the freshman year, and B.M. Ed. candidates for five. B.M. candidates will participate in ensembles for eight semesters; B.M. Ed. candidates, seven semesters; and B.A. candidates, four semesters. Pianists will meet part of these requirements through studio accompanying, as directed by the chairman of the piano department. Pianists will include at least two semesters of choral ensemble. Instrumentalists, with the exception of keyboard and guitar majors, will satisfy ensemble requirements through participation in orchestra or symphonic band. A music major may enroll for individual instruction in other instruments, or class instruction in applied music, or other ensembles, depending upon his or her abilities, needs, interests, and available time.

Instruction in Applied Music

Instruction for academic credit in voice, piano, and most other instruments is available to University students with fees as described below. Music majors are given priority, but non-majors are also welcomed, subject to the limits of available faculty time.

All students must enroll during the regular University registration period at the beginning of each term. For University students there are two important procedures: 1. Registration for academic credit is done in the manner as for other classes in the University (i.e., by, registration or "drop-add" with the student's adviser, dean and the registration office). 2. Procedures leading to billing and assignment to a teacher are initiated in the Music Office in Hill Hall.

Music fees are paid during the registration period. When the Music Office receives a receipt, the student will be allowed to begin lessons.

University students who are not music majors may receive 0.5 semester hours credit for one half-hour lesson per week during the semester, or one hour credit for one hour lesson (or one and one-half hours of class lesson) per week during the semester.

Applied Instruction Fees (per semester)	
One hour private lesson (or one and one-half hours of class lesson) per week	$210.00
One half-hour lesson per week	$110.00
Practice Room and Facilities Fees (per semester)	
Music majors enrolled for private instruction	
Piano, organ, and percussion majors	$ 45.00
Voice Majors	$ 35.00
All other majors	$ 25.00
Others enrolled for applied instruction	
Piano, organ, harp and percussion (one hour per day)	$ 35.00
Voice (one hour per day)	$ 25.00
All other (one hour per day)	$ 15.00
Other Fees	
Instrument rental, any instrument, for one semester	$ 30.00
Padlock rental, duration of student's stay in the Department	$ 5.00

Note: The schedule of fees is subject to change each year.

Applied Music Teachers

Piano: Miles, *Chair*. Rowan, Whang, Zenge.
Organ: Kremer, Chair.
Harpsichord: Kremer, Schulenberg.
Voice: Wing, Chair. Milholin, Rhodes.
Strings: Wissick, *Chair*.
Violin: Arnett, Luby
Viola: Woodward
Violoncello: Wissick
Bass: Link
Guitar: Stewart
Harp: Burroughs-Price
Wind, Brass, and Percussion Instruments: Smith, *Chair*.
Flute: Smith
Oboe: Wilsden
Clarinet: Oehler
Saxophone: Oehler
Bassoon: Pederson
Horn: Halverson
Trumpet: Ketch
Trombone: Jackson
Tuba: Flythe
Percussion: Glassock

Applied Music Courses

Individual instruction for one hour or one half-hour per week, each semester, is available in voice and most instruments, subject to the limits of available faculty time, with fees and variable credit as described above. A large variety of ensembles is open to students subject to approval of the conductor after audition. Undergraduates receive one hour of credit per semester for each ensemble course.

Applied Music Courses are designated as follows:

1A - Piano
1B - Organ
1C - Harpsichord
1Z - Class Piano
2 - Voice
2Z - Class Voice for B.M.Ed. majors
3A - Violin
3B - Viola
3C - Violoncello
3D - String Bass
3E - Harp
3F - Guitar
3Z - Class Strings for B.M.Ed. majors
4A - Flute
4B - Oboe
4C - Clarinet
4D - Saxophone
4E - Bassoon
4F - Recorder
4Z - Class Woodwinds for B.M.Ed. majors
5A - French Horn
5B - Trumpet
5C - Trombone
5D - Tuba
5Z - Class Brass for B.M.Ed. majors
6 - Percussion
6Z - Class Percussion for B.M.Ed. majors
7A - University Symphony
7B - Chamber Orchestra
7C - Symphonic Band
7D - New Music Ensemble
7E - Jazz Lab Band
7F - Brass Chamber Ensemble
7G - Woodwind Chamber Ensemble
7H - String Chamber Ensemble
7J - University Chamber Players
7K - Piano Ensemble
7L - Marching/Pep/Lab Band
7M - Guitar Ensemble
7N - Percussion Ensemble
7P - Concert Band
8A - Carolina Choir
8B - University Mixed Chorus
8C - University Chamber Singers
8D - Men's Glee Club
8E - Opera Theatre
8F - Women's Glee Club
8G - Collegium Musicum
10R - Recital (Required for music majors)
11A - Piano Major
11B - Organ Major
12 - Voice Major
13A - Violin Major
13B - Viola Major
13C - Violoncello Major
13D - String Bass Major
13E - Harp Major
13F - Guitar Major
14A - Flute Major
14B - Oboe Major
14C - Clarinet Major
14D - Saxophone Major
14E - Bassoon Major
15A - French Horn Major
15B - Trumpet Major
15C - Trombone Major
15D - Tuba Major
16 - Percussion Majore

Department of Naval Sciences

Captain Robert B. Avery, *USN, Chair*

Since its commissioning in 1941, the Naval ROTC unit of The University of North Carolina at Chapel Hill has commissioned hundreds of officers into the Navy and the Marine Corps. The proud tradition established at Chapel Hill is highlighted by the fact that at one time only the Naval Academy had commissioned more Naval Officers than this University.

The purpose of the Naval Reserve Officers Training Corps is to provide a source of highly qualified officers to serve on ships, as Aviators, Submariners, or in the Marine Corps. Additionally, the NROTC Program offers scholarships for students pursuing a degree in nursing. Students (Midshipmen) who obtain a baccalaureate degree and satisfy academic and physical requirements are commissioned as either an Ensign in the Navy or Second Lieutenant in the Marine Corps. Nursing degree students receive an Ensign commission in the Navy Nurse Corps. Students may participate in NROTC in one of two programs, the NROTC Scholarship or the NROTC College Program.

NROTC Scholarships provide for books, fees, tuition, uniforms, and a monthly allowance of $100. Students participating in the College Program receive their NROTC books, uniforms, and a monthly allowance of $100 during the junior and senior years. A major advantage of the College program is the excellent opportunity to win two- and three-year NROTC Scholarships.

Regardless of enrollment category, many things are common to both programs:

A. Most Naval Science courses are accredited.
B. No military obligation is incurred until the sophomore year for Scholarship Midshipmen and until the junior year for College Program Midshipmen.
C. The benefits of a Navy Scholarship are not affected by other types of financial aid for which a student may qualify.
D. All Midshipmen who successfully complete program and graduation requirements receive commissions as officers in the Navy or Marine Corps.
E. Applicants are considered without regard to race or sex.

Midshipman Life

Maximum attention is dedicated to ensuring that each Midshipman leads a full and productive university life. Midshipmen are encouraged to participate on university athletic teams as well as in campus politics, fraternities, dormitories, intramurals, sororities, and other organizations. Additionally, Midshipmen are provided an outstanding opportunity to examine and experience many alternative career patterns, social events, and experiences through field trips, summer cruises, and the Midshipman military organization.

NROTC Program

Midshipmen take the same basic Naval Science courses and laboratories in the first two years. This involves a combination of Naval Science courses and a selection of Peace, War, and Defense Curriculum courses designed to provide a well-rounded individual to commissioned service. During the junior and senior years, students who desire a commission in the Marine Corps take Naval Science 53 and 54 in place of Naval Science 51, 52, 61, and 62. Midshipmen pursuing a nursing degree participate in an abbreviated NROTC curriculum.

Further information regarding application for and admission in The UNC-Chapel Hill Naval ROTC may be obtained by visiting the Naval Armory on campus, or addressing an inquiry to the **Professor of Naval Science, CB# 3325, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina 27599-3325** or by calling (919) 962-1198/2344. Further information regarding the national Naval ROTC program is available from any Navy or Marine Recruiting Station or any established Naval or Marine Reserve Unit.

31 Introduction to Naval Science *(PWAD 31)* (0). Fundamental orientation to Naval service emphasizing the mission, organization, regulations, customs and traditions, broad warfare components, and major challenges facing Naval/Marine Corps officers. Fall. Staff.

32 Naval Ships Engineering Systems *(PWAD 32)* (3). An introductory course and survey of ship design, characteristics, propulsion (including nuclear power) and control systems, and the principles of ship stability. Spring. Staff.

41 Naval Weapons Systems *(PWAD 41)* (3). A descriptive survey course in engineering aspects of ships weapons guidance, control, and propulsion systems and characteristics of ships weapons systems. Fall. Staff.

51 Navigation *(PWAD 51)* (3). A comprehensive study of the theory, principles, and procedures of ship navigation, movements, and employment. Course includes spherical trigonometry, mathematics, analysis, study and practices, spherical, triangulation, sextants, navigation publications, and report logs. Covers rules of the road, lights, signals, and navigational aids, including inertial systems. Fall. Staff.

51L Navigation Laboratory *(PWAD 51L)* (1). Corequisite, NAVS 51. Practical application of the theories and principles of Navigation as presented in the lecture series. Fall. Staff.

52 Naval Operations (PWAD 52) (4). Prerequisite, NAVS 51 or permission of chairman. Continuation of Naval Science 51. Spring. Staff.

52L Naval Operations Laboratory *(PWAD 52L)* (0). Corequisite, NAVS 52. Practical application of the theories of Naval Operations as presented in the lecture series. Spring. Staff.

53 Evolution of Warfare. *(PWAD 53)* (3). Survey of the evolution of warfare through the study of selected campaigns and classic battles, with special emphasis on the principles of war, the military impact of leadership, and the evolution of tactics, weapons, and weaponry. Fall. Staff.

54 Amphibious Warfare *(PWAD 54)* (3). A survey of the projection of sea power ashore, with special emphasis on the evolution of an innovation in amphibious warfare in the 20th century, through the study of historical amphibious landings and campaigns. Spring. Staff.

55L Marine Option Naval Science Laboratory *(PWAD 55L)* (0). One laboratory hour per week designed to introduce topics and activities relevant to the professional development of the prospective Marine Corps Officer. Required for Marine Option 2/C. Fall and spring. Staff.

61 Naval Leadership and Management Part I *(PWAD 61)* (1). A study of organizational principles, management theory, and leadership styles as they apply in the Navy and Department of Defense. Fall. Staff.

62 Naval Leadership and Management Part II *(PWAD 62)* (0). Culminating leadership course in NROTC curriculum, emphasizing skills and abilities for the competent commissioned officer in areas of human resources and materials management. Spring. Staff.

70L Naval Science Laboratory *(PWAD 70L)* (0). Meets once a week to provide supplemental military training including close order drill, physical fitness, inspections, guest lectures, and leadership training. Required of all NROTC students each semester. Fall and spring. Staff.

Department of Operations Research

Shaler Stidham, Jr., *Chair*

Operations Research is concerned with the process of decision making for the purpose of optimal resource allocation. The spectrum of related activities includes basic research in optimization theory, development of deterministic and stochastic mathematical models as aids for decision making, and application of these models to real world problems. The principal steps in this type of mathematical modeling consist of analyzing relationships that determine the probable future consequences of decision choices and devising appropriate measures of effectiveness in order to evaluate the relative merits of alternative actions. During the past thirty years, operations research has developed into a discipline whose methods of analysis are regularly employed in many diverse industries and governmental agencies.

The Department of Operations Research offers instruction and conducts research in all principal areas of operations research. Undergraduates who plan to do graduate work in operations research are encouraged to major in mathematics and include the courses listed below as part of their programs of study. For students who wish to become familiar with the use of quantitative models for decision making but do not plan graduate work in operations research, the Department offers ORSA 40.

40 Introduction to the Decision Sciences (3). Prerequisite, Mathematics 22 or equivalent. Formulating and solving problems in decision making using mathematical models. Includes topical examples and introduction to concepts such as optimal allocation of a limited resource, decisions under uncertainty, risk, expected return. Three lecture hours per week. Fall. Staff.

181 Deterministic Models in Operations Research *(Mathematics 151) (Statistics 181)* (3). Prerequisite, Mathematics 147. Linear, integer, nonlinear and dynamic programming, classical optimization problems, network theory. Fall. Hartmann.

183 Stochastic Models in Operations Research (3). Prerequisite, Biostatistics 160/Statistics 126. Introduction to Markov chains, Poisson process, continuous-time Markov chains, renewal theory. Applications to queueing systems inventory, and reliability, with emphasis on systems modeling, design, and control. Spring. Staff.

Department of Pathology

Joe Wheeler Grisham, *Chair*

Pathology is the study of disease, its causes, development, and consequences. It is concerned with basic mechanisms of disease processes (pathobiology), and their structural/functional manifestations. It combines the tools and the basic knowledge from many disciplines, such as biochemistry, genetics, immunology, molecular biology, and clinical sciences, to clarify the cause (etiology), natural course (pathogenesis), and diagnosis of disease.

90 Pathology for Physical Therapy Students (3). Prerequisites, anatomy, histology, and physiology. A series of lectures and demonstrations of pathologic processes. Four and a half lecture and laboratory hours and two laboratories a week. Fall. Geratz.

162 Experimental Pathology. Hours, credits, and instructor to be arranged on an individual basis. This course involves hands-on research experience in a predetermined instructor's laboratory. Students have the opportunity to learn and apply specific techniques and to participate in investigations of molecular mechanisms responsible for disease processes (pathobiology).

178 DNA Replication, Recombination, and Repair (2). Prerequisite, Biochemistry 100. The course will examine the molecular biology of DNA replication, recombination, and repair as these processes occur in human cells. Spring 1990 and alternate years. Kaufmann.

179 Human Pathobiology (3). Prerequisite, permission of instructor. This course is an introduction to the pathological basis of disease and will examine etiologies of human diseases such as atherosclerosis and cancer with emphasis on both pathological and biological features. Three lectures. Spring 1991 and alternate years. Kaufmann.

180 DNA and Cell Pathology *(Genetics 180) (Biochemistry 180)* (3). Prerequisites, Biochemistry 100 and permission of the instructor. The basic chemistry of DNA and its associated structural and replicative proteins as it relates to mechanisms of mutagenesis and carcinogenesis. Three lecture hours a week. Spring 1991 and alternate years. Topal.

195 Fundamentals of Cancer Biology *(Epidemiology 195)* (3). A survey of basic information on the biology of cancer. It is designed for students and health professionals interested in an overview of current information on cancer development. Three lectures per week. Fall 1992. Staff.

197 Fundamentals of Clinical Oncology *(Epidemiology 197)* (3). Overview of clinical management, diagnosis, and treatment of cancer. It is directed to students and health professionals interested in the interdisciplinary aspects of cancer. Three lecture hours per week. Spring 1992. Staff.

Curriculum in Peace, War, and Defense

Russel Van Wyk, *Acting Chair. Advisory Committee:* Professors Bernard R. Boxill, E. Willis Brooks, Corrine Dauber, Howard Harper, Richard Kohn, Eric Mlyn, Lars Schoultz, Dietrich Schroeer, Captain Theodore W. Triebel, and Lt. Col. Michael Smiley.

The Curriculum in Peace, War, and Defense is an interdisciplinary, undergraduate program that uses both a humanistic and a social science approach to examine the fundamental issues of peace and war. Two core courses - "The Ethics of Peace, War, and Defense" and "Peace and War" - introduce the student to these approaches, while a flexible program of electives permits the student to consider the theoretical dimensions of the use of force; to study past efforts to control, or fail to control, conflict; and to appreciate the public dimensions of the issues of peace and war. From this the Curriculum hopes to show its majors the complexity of human conflict, the importance of a theoretical and factual basis for progress in reducing conflict and aggression, and the need for realistic appraisals of the needs of national security and defense.

Majors should be particularly well equipped for graduate work in diplomatic and military history, in international relations, peace research, and defense management; for possible careers in the public service: the diplomatic corps, the military branches, the civil service; and for professional programs such as law and public policy and environmental policy.

All courses included in the Curriculum, except for seminars, sections for honors, and directed readings, are listed as regular offerings by the various departments. In addition, the two core courses, other courses developed by the Curriculum, and the ROTC courses are cross-listed as Peace, War, and Defense courses.

Prospective majors should see the chairman of the Curriculum.

Bachelor of Arts with a Major in Peace, War, and Defense

General College: all General College requirements must be met. It is recommended that a student take as many of the following courses as possible: Aerospace 11a, 11b; Anthropology 41; Economics 10; History 17, 18, 21, 22; Mathematics 22; Naval Science 32, 41; Philosophy 22, 37; Political Science 41, 52, 86; Psychology 10; Sociology 10; Statistics 11.

Third and Fourth Years: the major in Peace, War, and Defense consists of an interdisciplinary core of seven courses and an interdisciplinary "major" of six courses.

Core Requirements: 21 hours are required. These include two core courses: Peace, War, and Defense 68 (Philosophy 42/Political Science 68) and 78 (History 89). Four other courses must be chosen from at least three different departments: Anthropology 112, 116, 122; Economics 71 (Political Science 71/Sociology 71), 161; English 196A, 196B; History 68, 69, 152; Political Science 149; Sociology 120, 143. One ROTC course must be selected from the following Peace, War, and Defense courses: 51, 52, 53, 54, 59, 61, 62, 65, 149. Courses used to meet Core Requirements cannot be counted toward fulfillment of the Major Requirement.

Major Requirements: 18 hours are required, with two courses to be taken from each of the following groups and no more than four from any department: Group A: Anthropology 112, 116; English 196A, 196B; Philosophy 22, 37, 112; Political Science 69, 141, 142; Psychology 129; Russian 75; Sociology 111, 120, 143. Group B: History 63, 68, 69, 71, 102, 146, 152; Political Science 86, 88, 143, 144. Group

C: BIOL 94A; Economics 71 (Political Science 71, Sociology 71); Political Science 149, 147; Physics 84; Sociology 33. Three or more advanced courses in each of two separate disciplines must be included in the junior/senior program.

50 Environmental Protection *(ENVR 51)* (3). Prerequisite, natural science requirement of the General College. A man-centered study of the health, economic, ecological, and aesthetic effects of our use of water, air, and land. The physical, biological, and chemical processes that occur in nature are studied, particularly as they relate to man's activities and his generation of waste residues, heat, noise, and radiation. Methods of control and for abatement for environmental degradation are presented. Three lecture hours a week, fall and spring. Francisco.

60 Rhetoric of War and Peace *(Speech 62)* (3). See Speech 62 for description.

63 History of Seapower *(History 63)* (3). The influence of seapower on international affairs, including an overview of naval history, the development of American sea power, its current status, and its modern world impact. Spring.

68 The Ethics of Peace, War, and Defense *(Philosophy 42, Political Science 68)* (3). Authority of the state and ethics of its acts; pacifism and national defense; the ethics of revolution; the moral problems of war in the nuclear age; the moral conditions of peace. Fall. Boxill.

69 Personality and Political Aggression *(Political Science 69)* (3). Personal origins of political aggression, their expression at the group and individual level, possibilities for limitations by public policy. Fall. Stern.

75 The Image of the Bolshevik Revolution in Soviet Literature *(Russian 75)* (3). Russian poems, fiction and plays depicting the Bolshevik Revolution of 1917 - 1921 offer a personal view of the Revolution as seen by the participants. The course should help in understanding the true causes and consequences of the Revolution. Lectures and readings in English. Spring. Mihailovich.

76 American Military History, 1754 - 1865 *(History 68)* (3). A survey of American military experience. The Colonial Wars, Revolution, War of 1812, Mexican War, and Civil War are analyzed against a background of politics, technology, and diplomacy. Fall. Kohn.

77 American Military History 1866 to the Present. *(History 69).* A survey of American military experience. The Indian Wars, Spanish-American War, WWI, WWII, Korea, and Southeast Asia are analyzed from an American and European perspective. Spring. Kohn.

78 Peace and War *(History 89)* (3). This course will examine the phenomena of peace and war in human existence. The emphasis will be historical, with conceptual tools from other disciplines used when appropriate. Theoretical explanations, militarism, the international system, internal order, and the search for peace will be among the topics. Spring. Brooks.

84 Science, Technology, and the Arms Race *(Physics 84)* (3). The effect of modern scientific-technological developments on military strategy. Topics include nuclear proliferation, SALT, space, energy, and technical alternatives to nuclear weapons. Fall. Schroeer.

86 International Relations and World Politics *(Political Science 86)* (3). The analysis of politics among nations. Fall and spring. Chi, Donnelly, McKeown, Obler, Scott.

90 Seminars in Peace, War and Defense (3). Student-faculty seminars on aspects of peace, war, and defense with outside experts as participants. Past topics have included arms control, public opinion and national security, and the Cold War. Fall and spring. Staff.

91 Honors in Peace, War, and Defense (3). Directed research, on an independent basis, for majors who are preparing an honors thesis and for the oral examination on the thesis. Spring. Staff.

92 Honors in Peace, War, and Defense (3). Directed research, on an independent basis, for majors who are preparing an honors thesis and for the oral examination on the thesis. Spring. Staff.

93 Directed Readings in Peace, War, and Defense (3). Intensive directed readings on a facet of peace, war, and defense. Open to majors in PWAD and to other qualified students. May be taken only once. Fall and spring. Staff.

106 Ancient Greek Warfare *(History 102A)* (3). War and the warrior in the archaic and classical Greek world, 7th-4th centuries B.C. Fall or spring. McCoy.

118 The Vietnam War and American Society, 1940 - 1975 *(History 71)* (3). A study of the origins and course of American involvement in Vietnam including the strategy, technology, and effect of the war on American Society, 1940 - 1975. Spring. Staff.

127B War and Society In Early Modern Europe *(History 127B)* (3). A critical examination, from the Renaissance to the eve of the French Revolution, of the changes in European land and Naval warfare and their impact on society and government. Fall, Spring. McIntosh.

138 Power, Morality, and Foreign Policy *(Political Science 138)* (3). Prerequisite, POLI 86. To what extent can, and should, moral concerns be integrated into national foreign policies - An examination of theoretical alternatives as well as selected substantive issues (e.g., human rights, just war, food policy, development assistance). Fall. Donnelly.

141 Theories of War and Peace *(Political Science 141)* (3). Theories of international relations, with emphasis on the role of force, causes of conflict, and conditions of cooperation. Fall or spring. Sayer.

146 Revolution and Nation-Making in America, 1763 - 1815 *(History 146)* (3). Major topics: constitutional conflict in the British empire; growth of political parties and nationality in a period of domestic change and international conflict. Spring. Higginbotham, Nelson.

147 The U.S. and Latin America *(Political Science 147)* (3). A comprehensive analysis of hemispheric international relations and foreign policies of individual Latin American nations. Spring. Schoultz.

149 Defense Policy and National Security *(Aerospace Studies 149) (Political Science 49).* (3). National defense policy, including strategy, weapons systems, and the bureaucracies/organizations that deal with them. Lectures and discussion sections. Fall. Mlyn.

152 U.S. Foreign Relations 1914 to Present. *(History 152)* (3). General survey of the emergence of the U.S. as a superpower with global rather than merely continental or hemispheric responsibilities. Spring. Hunt.

154 The Judicial System and National Security *(Political Science 154)* (3). Analysis of the critical role of the American Judicial system in questions of national security with special attention to constraints on the powers of President, Congress, and security agencies. Fall. Richardson. (Alternate years.)

162 War and Culture *(SPCH 162)* (3). See Speech Communication for details.

196A Images of Vietnam War in 20th-Century Literature *(English 196A).* A study of literary works written in English concerning the Vietnam War. Harper. (Alternate years.)

196B Images of World War I in 20th-Century Literature *(English 196B).* A study of literary works written in English and concerning World War I. Armitage. (Alternate years.)

Department of Pharmacology

Rudolph L. Juliano, *Chair*

The Department of Pharmacology offers courses to undergraduate students but does not offer a formal major leading to an undergraduate degree. Courses are available to premedical, predental, and pharmacy students as well as students pursuing science majors. The Department of Pharmacology places a high priority on the training of graduate students for productive careers in pharmacological sciences.

Unique among the basic sciences, pharmacology combines fundamental laboratory research with the development of drugs to prevent and treat human disease. The scope of investigation includes studies of the mechanism of action of drugs, hormones and growth factors, the development of drugs for the treatment of cancer, infections, arthritis, psychoses and other diseases, and the study of toxic chemicals in the environment.

55 - 56 General Pharmacology (3 each). Prerequisites, all preceding courses in chemistry, biology, bacteriology, and physiology in the Pharmacy School curriculum or their equivalent. A course for pharmacy students. General principles, as they apply to the major drug classes, will be stressed. Fall and spring. Dudley.

110 Techniques in Physiological Pharmacology (3). Prerequisites, Pharmacology 55, Pharmacology 202, and permission of the instructor. Students will learn and perform a variety of physiological techniques often used in classical pharmacological research. One lecture and six laboratory hours a week. Spring. Staff. (1988 and alternate years.)

123 Behavioral Pharmacology *(Neurobiology 123) (Psychology 123).* Prerequisites, Pharmacology 216, or Psychology 101 and 106, or their equivalent. Basic principles of pharmacology and of the experimental analysis of animal behavior will be considered in relation to drugs that affect the central nervous system. On demand. Staff.

Department of Philosophy

Gerald J. Postema, *Chair*

The Department of Philosophy is a member of the Humanities, Social Sciences, and Natural Sciences divisions of the College of Arts and Sciences. Philosophy may be taken as an elective, as a major, as a minor, or as a part of a double major by students in any of these divisions; it may also be taken to meet certain General College distribution requirements as well as the Philosophical Perspective.

For beginners, Philosophy 20 or Philosophy 24 are recommended as a first course for those interested in philosophical issues and their cultural significance; 21 for those interested in the nature of argument and training in clarity of thought and logical rigor; 22 for those seeking an understanding of moral thought and experience; 31 for those who wish to investigate the logic of inquiry in both the formal and the empirical sciences.

Courses in the 30 level are fairly specific, introductory courses in traditional philosophical areas. Courses in the 40s are oriented toward particular problems or topics. History of philosophy courses are numbered in the 50s and 60s. Courses between 70 and 100 are designed for advanced undergraduates and majors. Courses on the 100 level are for advanced undergraduates, graduates and for students in the natural and social sciences, computer science, and literature, with an interest in philosophical problems connected with their special subject matter.

A major in philosophy requires eight philosophy courses, including 56, 58, one course from those numbered 30 - 55, and one course numbered 70 - 99. For a major with honors from the Philosophy Department, a student must take eight courses including 56, 58, one course from those numbered 30 - 55, two courses from those numbered 70 - 99, and 100 (a and b). A minor in philosophy requires five courses including 56, 58, one course from those numbered 30 - 55 and one course from those numbered 70 - 99. Substitutions for the above required courses may be approved by the Director of Undergraduate Studies. Philosophy 21 is recommended for all students majoring or minoring in philosophy. No courses used to meet General College Perspective or Skills requirements may be counted towards the major or minor. Students interested in majoring or minoring in philosophy should work closely with their advisers in planning their program.

Logic

Note: These courses fulfill the Mathematical Skills, but not Philosophical Perspective Requirement.

21 Introductory Symbolic Logic (3). Prerequisite, MATH 10. Introduction to the theory of deductive reasoning. Fall and spring. Resnik, Munsat, Simmons, staff.

21H Introductory Symbolic Logic (3). Honors. Fall and spring. Resnik, Munsat, Simmons, staff.

71 Topics in Logic (3). Varying content but topics may include alternative logics, decision theory, probability and induction. May be repeated for credit with the permission of the instructor. Fall or spring. Resnik, Simmons.

General Introductory Courses

20 Introduction to Philosophy: Main Problems (3). An introduction to the study of philosophy through the examination of major philosophical problems. Specific content varies with section. Consult Department of Philosophy for details. Fall and spring. Staff.

20H Introduction to Philosophy: Main Problems (3). Honors. Fall and spring. Staff.

22 Introduction to Ethics (3). An introduction to the study of moral issues and philosophical questions concerning morality. Fall and spring. Staff.

24 Introduction to Philosophy: Great Works (3). An introduction to the study of philosophy through examination of major texts that have shaped the history of philosophical thought. Fall and spring. Staff.

Topical Introductory Courses

31 Philosophy of Science (3). What is the relationship between observation and theory? Are observations objective? Can theories ever be proven? Fall or spring. Schlesinger, Resnik.

32 Philosophy of Religion *(Religion 32)* (3). A philosophical inquiry into the problems of religious experience and belief, as expressed in philosophic, religious and literary documents from traditional and contemporary sources. Fall and spring. Nord, Schlesinger.

33 Philosophical Problems About Art (3). A discussion of philosophical problems concerning art and art appreciation. Fall and spring. Vance, Tirrell.

34 Bioethics (3). The ethical basis of moral and legal problems generated or made acute by advances in biology and medicine, e.g., abortion, euthanasia, patient rights, experiments with human subjects, genetic manipulation. Fall and spring. D. Bar-On, Long, staff.

35 Language and Communication *(Linguistics 35)* (3). An introduction to some of the key concepts and problems in the study of the nature of a natural language: meaning, reference, denotation and connotation, synonymy, syntax and semantics, animal language, innateness. Fall. Munsat, Lycan.

36 Philosophy of the Social Sciences (3). An examination of competing philosophical views on the nature of social science and its relation to natural science, with emphasis on the concepts of law and explanation of historical, sociological, and psychological contexts. (Fulfills Social Science, but not Philosophical Perspective.) Spring Zaffron.

37 Social Ethics and Political Thought (3). Individual rights, social responsibility, legal authority, civil authority, civil disobedience, war and peace. Readings selected from classical and contemporary writings. Fall and spring. Postema, Hill, B. Boxill.

38 Experience and Reality (3). An introduction to metaphysics, exploring issues such as the nature of persons, our experience of things, the mind-body relation, appearance vs. reality, space and time, the character of the external world, a deity. Spring. Rosenberg, Vance, Lycan, Simmons.

Supporting Courses

41 Morality and Law (3). An examination of morality and law - their natures, interrelationship, and selected problems. Fall or spring. Postema, Hill.

42 The Ethics of Peace, War, and Defense *(Political Science 68) (Peace, War, and Defense 68)* (3). Authority of the state and the ethics of its acts; pacifism and national defense; the ethics of revolution; the moral problems of war in the nuclear age; the moral conditions of peace. Fall or spring. B. Boxill, J. Boxill.

43 The Claims of Science and Religion *(Religion 33)* (3). The proposition that God exists treated as a scientific hypothesis. Evidence for and against the hypothesis. The status of other minds and free will in science and religion. Conflicting views about creation, revelation, miracles and prayers. Spring. Schlesinger.

46 Philosophical Issues in Feminism *(Women's Studies 46)* (3). Moral issues of equal rights and justice; sex role stereotypes; equal opportunity and reverse discrimination; abortion; philosophers' theories of feminism. Fall or spring. Tirrell, J. Boxill.

48 Contemporary Issues and Philosophy (3). A study of one or more issues of contemporary concern from a philosophical perspective. Consult the Department of Philosophy for specific course content. Fall or spring. Staff.

55 Afro-American Political Philosophy *(Afro-American 55)* (3). A philosophical examination of the writings of African-Americans on slavery, racism, and discrimination. Among the main figures studied are Martin Delany, Frederick Douglass, Booker T. Washington, W. E. B. DuBois, Marcus Garvey, and Martin Luther King. Fall or spring. B. Boxill.

History of Philosophy

56 Ancient Philosophy (3). A philosophical examination of the writing of the pre-Socratics, Plato, Aristotle, Epicureanism, Stoicism, Neoplatonism, and Greek Skepticism. Fall and spring. Galligan, R. Long.

57 Medieval Philosophy *(Religion 63)* (3). A survey of medieval philosophy from Augustine through Ockham. Topics: God and the world, faith and reason, knowledge and reality, the problem of universals. Additional main authors: Anselm, Aquinas, Duns Scotus. Spring. Galligan, R. Long.

58 Modern Philosophy: Descartes to Hume (3). Prerequisite, one course in Philosophy other than Philosophy 21. Topics from major rationalist and empiricist philosophers such as Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume. Fall and spring. Vance.

59 American Philosophy (3). A survey of the major American philosophers and movements from Jonathan Edwards to the present. Fall. Smyth.

60 History of Philosophy from Kant to the Present (3). An introductory survey of the major figures and movements in nineteenth and early twentieth century philosophy. Spring. Smyth.

64 Existential Philosophy from Kierkegaard to Sartre (3). An examination of existentialism and the philosophy of being, as presented in the work of such authors as Kierkegaard, Nietzsche, Marcel, Heidegger, Jaspers and Sartre. Fall. Smyth.

65 Recent Existential Thoughts and Its Critics (3). An examination of existential philosophy since World War II and of its relation to other intellectual movements, including East European Marxism and French structuralism. Spring. Smyth.

Advanced Courses

Note: Prerequisite, one course other than Philosophy 21

70 History of Ethics (3). A survey of major developments in the history of moral philosophy, examining in detail selections from philosophers from Plato to Nietzsche. Philosophy 22 recommended as prerequisite. Fall or spring. Hill, Long, Sayre McCord.

72 Contemporary Ethical Theory (3). Intensive study of the most important writings in moral philosophy in the twentieth century. Philosophy 22 recommended as a prerequisite. Fall or spring. Hill, Sayre McCord, Blackburn.

73 Theory of Knowledge (3). Examination in detail of several theories of knowledge, evidence, truth and perception. Special topics: knowledge of physical objects, minds, objects of scientific theories and of mathematics. Fall or spring. Rosenberg, Lycan, Simmons, Blackburn.

74 Reference and Meaning (3). Survey of major topics in contemporary philosophy of language including truth and meaning, speech acts, reference, descriptions, names, and demonstratives. Fall or spring. Bar-On, Blackburn, Lycan, Rosenberg, Tirrell.

75 Metaphysical Systems (3). Study of recent attempts to frame a comprehensive world view. Particular attention will be given to the problem of revising traditional categories in response to developments in other branches of knowledge. Fall or spring. Smyth, Simmons.

76 Topics in the Philosophy of Mind (3). Survey of major issues in the philosophy of mind, including the mind-body problem, explanation of action, and nature of mental states. Readings from classical and contemporary sources. Fall or spring. Blackburn, Long, Lycan, Munsat, Rosenberg, Vance.

78 Political Philosophy (3). Advanced discussion of competing philosophical approaches to questions of justice, authority, freedom, rights, and the like including Libertarianism, Liberalism, Communitarianism, Marxism, and Feminism. Fall or spring. Boxill, R. Long, Postema.

80 Seminar in Selected Topics (3). Small seminar setting for intensive exploration and classroom discussion of a central topic in contemporary philosophy. Students will present papers in class and critique papers of other students. Fall or spring. Vance, staff.

96 Colloquium for Philosophy Majors (3). Discussion of selected philosophical topics. Recommended for Philosophy majors, normally to be taken in the spring semester of their junior year. Spring. Vance, staff.

99 Directed Readings (3). See the Director of Undergraduate Studies of the Department. Fall and spring. Staff.

100a, 100b Courses for Honors (3 each). See the Director of Undergraduate Studies of the Department. Fall, spring. Staff.

Courses for Undergraduates and Graduates

Note: Prerequisite for the following courses, one course other than Philosophy 21 unless otherwise specified. Instructors may waive prerequisites.

101 Symbolic Logic *(Linguistics 104)* (3). Introduction for graduates and advanced undergraduates not taking the 21 - 71 sequence. Fall. Resnik, Simmons.

102 Selected Topics in the History of Moral Philosophy (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 70 recommended) or permission of instructor. Study of major figures in the history of moral thought such as Plato, Aristotle, Butler and Kant. The philosphers to be studied will vary from year to year. Fall. Hill, Sayre McCord.

103 Philosophy of Art (3). Development of a comprehensive and systematic philosophy of art and criticism through examination of contrasting aesthetic theories and works of art. Spring. Vance, Tirrell.

104 Hegel, Marx and the Philosophical Critique of Society (3). Certain trends in modern social, political and psychological thought as found in the philosophies of Hegel and Marx. Freedom, self-identity, alienation, history, and exploitation. Spring. Postema.

105 Political Philosophy from Hobbes to Rousseau (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 37 or 78 recommended) or permission of instructor. Hobbes and the modern state; Locke on individual rights; Rousseau, democracy and its problems. Fall. B. Boxill, Postema.

106 Philosophy of Mathematics (3). Prerequisites, Philosophy 101 or permission of instructor. Philosophical problems concerning logic and the foundation of mathematics. Fall or spring. Resnik, Simmons.

107 Philosophy, History and the Social Sciences (3). The nature of historical explanation, structural and functional explanation, the weighing of historical testimony, the concept of meaning, normative judgments and predictions in the social sciences. Fall or spring. Zaffron.

108 Philosophy of Natural Sciences (3). Concept formation, verifiability, law, explanation, the role of logic and mathematics in the sciences, and other topics. Fall. Schlesinger.

109 Philosophical Problems in Psychology (3). The nature and validation of psychological concepts, laws and theories; the theories of the mind, with emphasis on the comparative study of such concepts as motivation, intention, emotion, and action. Fall or spring. Zaffron.

110 Philosophy of Language *(Linguistics 110)* (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 74 recommended) or permission of instructor. A study of important contemporary contributions in philosophy of language, meaning, reference, and truth. Fall or spring. Bar-On, Lycan, Munsat, Tirrell.

111 Advanced Symbolic Logic (3). Prerequisite, Philosophy 101 or permission of instructor. Presupposes propositional and quantificational logic as a basis of further deductive development with special attention to selected topics: alternative systems, modal and deontic logic, inductive logic, the grammar of formalized languages, paradoxes and foundations of mathematics. Spring. Resnik, Simmons.

112 Contemporary Moral Philosophy (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 72 recommended) or permission of instructor. An examination of issues that have arisen in moral philosophy in this century, e.g., fact and value, reason and morality, and the nature of morality. Fall or spring. Blackburn, Hill, D. Long, Sayre McCord.

113 Philosophy of Law (3). Study of classical and contemporary theories of law and legal reasoning; the role of morality in the formation, discovery, and application of law. Fall. Postema.

114 The Beginnings of Analytic Philosophy (3). Prerequisite, two courses in philosophy other than Philosophy 21 or permission of instructor. An introduction to the major figures and movements of contemporary analytic philosophy. Russell, Moore, early Wittgenstein, Ayer, Ryle, Logical Atomism, Logical Positivism, Philosophical Behaviorism. Fall or spring. Blackburn, Lycan, Rosenberg.

115 Foundations of Mathematics (3). Prerequisite, Philosophy 101 or permission of instructor. The study of formal foundations of mathematics. Basic results concerning consistency, completeness and undecidability. Constructive consistency proofs for elementary number theory. Fall or spring. Resnik, Simmons.

116 Current Issues in Analytic Philosophy (3). Prerequisite, two courses in philosophy other than Philosophy 21 or permission of instructor. Dealing with some of the most significant contributions made by philosophers in the last ten years or so in the areas of epistemology and metaphysics. Spring. Bar-On. Blackburn, Schlesinger.

117 Philosophy of Mind (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 76 recommended) or permission of instructor. A critical survey of major theories of the mental such as dualism, behaviorism, the identity theory, and forms of functionalism. Problems of mental aboutness and of consciousness will be emphasized. Fall or spring. Bar-On, Blackburn, D. Long, Lycan, Rosenberg.

120 Contemporary Moral and Social Problems (3). Prerequisite, two courses in philosophy other than Philosophy 21 or permission of instructor. A detailed examination of one or more of the following contemporary issues; environmental ethics, animal rights, abortion, euthanasia, pornography, racism, sexism, public versus private morality. Fall or spring. B. Boxill, D. Long, Sayre McCord.

121 Space and Time in Physics and Philosophy (Physics 113) (3). Contingent and necessary properties of space and time. The direction and flow of time. Fatalism. Effects preceding their causes. Schlesinger, van Dam.

130 Recent Developments in Political Philosophy (3). Prerequisite, two courses in philosophy other than Philosophy 21 (Philosophy 78 recommended) or permission of instructor. A philosophical study of works by major contemporary contributors (e.g., Rawls, Arrow, Wolff, Walzer, Nozick) to such topics as justice, equality, democratic decision-making, legitimate authority, political obligation, natural rights. Fall or spring. Postema, B. Boxill.

142 Philosophy in Literature *(Comparative Literature 142)* (3). Selected literary classics from ancient times to the present, emphasizing changing approaches to such perennial problems as human nature and destiny, evil, freedom, and tragedy. Spring. Smyth, Tirrell.

145 History of Aesthetics *(Comparative Literature 145)* (3). Ancient and modern positions in aesthetics with attention to their philosophical foundations and their significance for the study of literature. Including Plato, Aristotle, Plotinus, Kant and Hegel. Spring. Smyth.

150 Plato (3). An examination of some representative works of Plato, with reference to common emphases and basic problems, together with an analysis of their philosophic content. Fall. Galligan, R. Long.

151 Aristotle (3). An examination of some representative works of Aristotle, with reference to common emphases and basic problems, together with an analysis of their philosophic content. Spring. Galligan, R. Long.

152 Topics in Medieval Philosophy *(Religion 132)* (3). An intensive study of some medieval philosophical author (e.g., Aquinas, Scotus, or Ockham;) or topic (e.g., arguments for the existence of God, universals, knowledge of individuals). Spring. Galligan, R. Long.

153 Continental Rationalism (3). The metaphysical systems of Descartes, Spinoza, and Leibniz as seventeenth century attempts to reconcile the medieval tradition and the early developments of modern natural science. Fall or spring. Smyth, Munsat. 154 British Empiricism (3). An epistemological study of Locke, Berkeley, and Hume. Spring. Blackburn, Munsat, Vance.

155 Kant (3). A close study of Kant's critical philosophy. Fall. Hill, Smyth, Rosenberg, Vance.

156 Hegel (3). Hegel's Absolute Idealism: its roots in Kant's critical philosophy and its influence on subsequent thought in Europe and America. Fall or spring. Smyth, Postema.

158 Existentialism and Phenomenology (3). A study of one or two major systematic works by Sartre, Heidegger or Merleau-Ponty. Spring. Smyth.

159 Topics in American Philosophy (3). A close study of selected works in American philosophy. Spring. Smyth.

178 Health Care, Science and Philosophy *(Physical Therapy 178)* (3). Interdisciplinary course to develop critical thinking capacities through philosophical study of the nature of scientific presuppositions and concepts, including events, causality, and determinism, with specific application to health care issues. Fall. Schlesinger, Mitchell.

185 Algebraic Logic I *(Mathematics 185)* (3). Prerequisite, Philosophy 101 or permission of instructor. Basic concepts in logic treated as a branch of mathematics. Topics may include: Boolean algebras, polyadic algebras, cylindric algebras, ultra products. Spring. Staff.

190 Set Theory and Logic (3). Prerequisite, Philosophy 101 or permission of instructor. Natural and real numbers. Infinite cardinal and ordinal numbers. Alternative axiom systems and their consistency problems. Spring. Resnik, Simmons.

Department of Physical Education, Excercise and Sport Science

John E. Billing, *Chair*

Coursework in the Department of Physical Education, Exercise and Sport Science serves a variety of student needs including: instruction in the knowledge and skills of our common cultural sports, dances and fitness activities; provision of adapted physical activity for the atypical student; a program of professional preparation for teachers of physical education and health; and a liberal arts study of sport and exercise science for students interested in careers other than teaching.

Majors Programs

Students interested in teaching Physical Education in the public schools should consult the School of Education for information concerning admission requirements.

B.A. in Education - Physical Education

The teaching major in physical education requires completion of the following requirements:

A. Physical Education Courses: PHYE: 55, 56, 57, 77, 79, 80, 81, 83, 85, 86, 87, 88, 89.
B. School of Education Courses: EDUC: 45, 53, 54, 56, 63, 64, 72.
C. Second Major Courses: 24 credits in a specified subject field

or

An interdisciplinary major consisting of Biology: 45, 63L, 52, 62, 62L
and
Two courses from one supporting department:
Psychology: 23, 80 or
Sociology: 20, 24, 122 or
Nutrition: 50, 115, 154

B.A. in Arts and Sciences

Many students are interested in studying physical activity, exercise and sport science but do not desire to pursue a teaching career. The Arts and Sciences exercise science major provides an understanding of how the human body develops physiologically and skillfully to perform in sport and exercise. This scientific basis of exercise and sport can then be augmented with supporting courses from other departments to prepare for a variety of nonteaching sport related careers, including: Health and Fitness, Sport Management and Sport Sciences.

Required Courses

All Arts and Sciences physical education majors must complete the following courses: PHYE: 59, 75, 76, 77, 80, 81, 86, 88. Additional courses may be taken as electives from courses numbered 41 - 99, and from related departments.

Students should carefully plan their program of study with a faculty adviser.

Minor in Physical Education, Exercise and Sport Science

There are two options for pursuing a minor in the Department of Physical Education, Exercise and Sport Science. Each option requires a total of five courses in Physical Education. History and Principles of Physical Education (PHYE 77) is a required core course for both options. Biology 11 and Biology 11L are prerequisites for both options. Each option is outlined below:

Coaching/Instructional Option

Biology 11 (3) and Biology 11L (1) Prerequisite
PHYE 77 History and Principles of Physical Education (3) Required core course

Two courses from:

PHYE 55 Analysis of Sports Skills I (3)
PHYE 56 Analysis of Sports Skills II (3)
PHYE 57 Analysis of Sports Skills III (3)
PHYE 59 Fitness Management (3)

Two courses from:

PHYE 79 Measurement/Evaluation in Health & Physical Education (3)
PHYE 80 Motor Skill Learning (3)
PHYE 81 Sports Psychology/Sociology (3)
PHYE 86 Administration of Physical Education and Athletics (3)
PHYE 87 Adapted Physical Education (3)
PHYE 88 Emergency Care of Injuries & Illness (3)

Exercise and Sport Science Option

Biology 11 (3) and Biology 11L (1) Prerequisite
PHYE 77 History and Principles of Physical Education (3) Required core course

Four courses from:

PHYE 59 Fitness Management (3)
PHYE 80 Motor Skill Learning (3)
PHYE 81 Sport Psychology/Sociology (3)
PHYE 85 Biomechanics of Sport (3) Prerequisite: PHYE 75 Anatomy (3) or Biology 45 (3) and Biology 63L (1)

PHYE 89 Physiological Basis of Human Performance (3)
Prerequisite: PHYE 76 Physiology (3) or Biology 45 (3) and Biology 63L (1)

Physical Education Activities Program

Two units of physical education and a swimming test are required of all students. Two additional units may be taken as nondegree-credit electives. Proficiency testing may be used to substitute for the required courses. These courses may be chosen from the following list:

1 - Adapted Physical Education
3 - Water Safety Instructor
4 - Badminton
5 - Ballet
5Y - Intermediate Ballet
5Z - Advanced Ballet
6 - Archery
7 - Bowling
7Y - Intermediate Bowling
8 - Horseback Riding
8Y - Intermediate Horseback Riding
8Z - Advanced Horseback Riding
9 - Fencing
9Y - Intermediate Fencing
9Z - Advanced Fencing
10 - Downhill Skiing
11 - Aerobic Dance
11Y - Intermediate Aerobic Dance
12 - Folk and Square Dance
13 - Golf
13Y - Intermediate Golf
13Z - Advanced Golf
14 - Tumbling/Gymnastics
14Y - Intermediate Tumbling/Gymnastics
15 - Handball
16 - Jogging
17 - Jazz Dancing
17Y - Intermediate Jazz Dancing
18 - Karate
18Y - Intermediate Karate
19 - Modern Dance
19Y - Intermediate Modern Dance
19Z - Advanced Modern Dance
20 - Racquetball
20Y - Intermediate Racquetball
20Z - Advanced Racquetball
21 - Introduction to Dance Techniques
22 - Self Defense
23 - Lifeguard Training
24 - Soccer
24Y - Intermediate Soccer
26 - Squash
26Y - Intermediate Squash
27Z - Survival Swimming
27 - Swimming
27Y - Intermediate Swimming
27Z - Advanced Swimming
28 - Triathlon
29 - Tennis
29Y - Intermediate Tennis
29Z - Advanced Tennis
30 - Bicycling
31 - Volleyball
31Y - Intermediate Volleyball
32 - Exercise and Conditioning
33 - Weight Training
33Y - Intermediate Weight Training
34 - Aerobic Circuit Training
35 - Scuba Diving
36 - Social Dance
36Y - Intermediate Social Dance
37 - Lifeguarding/First Aid Instructor
38 - Swim conditioning

All courses are coeducational.

All classes will be elementary unless followed by the letter Y (intermediate) or the letter Z (advanced).

Physical Education Courses For Undergraduates

41 Personal Health (3). Elective, open to all students. This course deals with basic concepts in the areas of physical fitness, disease control, mental health, drug abuse and human sexuality. Emphasis is upon the individual's responsibility for his/her own health. Fall, spring and summer. Staff.

55 Analysis of Sport Skills I (3). A professional preparation course in the skills, knowledges, safety and teaching progressions of basketball, soccer, track and field and volleyball. Fall. Staff.

56 Analysis of Sport Skills II (3). A professional preparation course in the skills, knowledges, safety and teaching progressions of basketball, gymnastics, and softball. Spring. Staff.

57 Analysis of Sports Skills III (3). A professional preparation course in the skills, knowledges, safety, and teaching progressions of tennis, badminton, weight training, bicycling, rock climbing, and canoeing. Generalized principles of coaching and team management are also included. Fall. Staff.

59 Fitness Management (3). The assessment and promotion of physical fitness including concepts and techniques of fitness testing, principles of weight training, aerobic dance, nutrition, and stress management as applied in health/fitness settings. Spring. Ainsworth, Billing.

63 Women in Sport (3). A sociohistorical study of the influence of work, leisure, politics, family, race, economics, education, and perceived roles on women's participation in sports. Staff.

74 Health and Physical Education in the Elementary School (3). This course deals with methods and materials of health and physical education in school levels kindergarten through sixth grade. Required of elementary education majors. Does not count toward physical education major. Fall, spring and summer. Jennings, Hyatt, Mueller.

75 Anatomy (3). This course is designed to teach the fundamentals of anatomy as they apply functionally to the area of health and physical education. Fall and spring. Robinson.

76 Physiology (3). Prerequisite, Physical Education 75 or the equivalent of BIOL 11, 41. A lecture course in elementary physiology, covering the various systems of the body. Fall and spring. McMurray, Hackney.

77 History and Principles of Physical Education (3). Open to all students as an elective course. A study of the relationship and contribution of physical education to general education, historical background, basic biological, physiological, and sociological backgrounds of the modern program. Fall and spring. Hyatt.

78 School Health Program (3). Open to majors only. This course covers the role of the health educator in the areas of instruction, environment, and services including community relationships. Emphasis is placed on functional aspects of content for which school health educators are responsible. Spring. Staff.

79 Measurement and Evaluation in Health and Physical Education (3). This course is designed to acquaint students with tests and measurements in the field of health and physical education, test construction, scoring, and methods of using results. Fall. Shields.

80 Motor Skill Learning (3). A study of theories and techniques pertinent to the acquisition of motor skills. Spring. Pleasants.

81 Sport Psychology/Sociology (3). An overview of psychological and sociological parameters of sport. Fall and spring. Silva, Hardy.

82 School and Community Health (2). Prerequisite, PHYE 41. The utilization of community health resources in a comprehensive school health education program. Emphasis is on communicable diseases, environmental health, and consumer education. Fall. Staff.

83 Physical Education for the Elementary School - Kindergarten Through Sixth Grade (3). This course deals with methods and materials of physical education in school levels kindergarten through the sixth grade. Required for physical education majors and elementary education majors; other students must secure written permission of instructor. Fall or spring. Jennings, Mueller.

84 Health Education for the Elementary School (3). This course includes principles, procedures, and practice in health at the elementary level. The course is required of all majors in elementary education. Fall or spring. Hyatt, Mueller.

85 Biomechanics of Sport (2). Prerequisites, BIOL 45 or PHYE 75, 76. A study of the role of biomechanical principals in human motion. Emphasis is directed toward the analysis of sport techniques. Fall. Robinson.

86 Administration of Physical Education and Athletics (3). This course deals with the policies and problems of organization and administration of physical education and athletic programs in school. Fall. Mueller.

87 Adapted Physical Education (3). This course is a study of problems relating to body mechanics and the needs of the physically handicapped student. Fall. Newnam.

88 Emergency Care of Injuries & Illness (3). Theory and practice of basic first aid, cardiopulmonary resuscitation and the acute care of athletic injuries. Fall and spring. Prentice, Murray.

89 Physiological Basis of Human Performance (3). Prerequisites, BIOL 45 or PHYE 75, 76. The application of physiological principles to sport and physical activity. Both immediate and chronic adaptations to exercise are studied. Two lecture and two laboratory hours a week. Fall. Ainsworth, Hackney.

90 Independent Studies in Physical Education (Var). Elective. Individually designed in-depth study of an area of interest within physical education, dance, sport, or health under the supervision of a selected member of staff. Credit varies from 1 - 3 hours. Fall and spring. Staff.

91 Theory and Practice of Ballet Technique (3). Elective. Prerequisites, PHYA 5Z or PHYT 19Y or permission of instructor. An intensive study of ballet technique and philosophy, focusing in the physical principles of movement and their choreographic application. One hour seminar and 41/2 hours laboratory. Fall and spring. Turner.

92 Dance Repertory (3). Elective, permission of instructor (audition). The rehearsal and performance of works of choreography. Will include participation in both the technical and promotional aspects of production. Six laboratory hours a week. Fall and spring. Turner.

93 Theory and Practice of Modern Dance Technique - Elementary Level (3). Elective. Prerequisites, one semester of dance instruction or permission of instructor. An intensive study of modern dance technique and philosophy, focusing on the physical principles of movement and their choreographic application. One hour seminar and 41/2 hours laboratory. Fall and spring. Turner.

95 Practicum in Athletic Training I (3). Prerequisites, PHYE 88 and permission of instructor. Basic athletic training skills, emergency procedures in sports, therapeutic modalities; evaluation and rehabilitation of foot and ankle injuries. Course combines lecture and clinical demonstration/participation. Fall. Murray

96 Practicum in Athletic Training II (3). Prerequisites, PHYE 88, PHYE 95. Assessment, treatment and rehabilitation of injuries to the knee, back, shoulder, elbow, wrist and hand. Course combines lecture and clinical demonstration/participation. Spring. Murray.

97 Theory and Practice of Modern Dance Technique - Intermediate Level (3). Elective. Prerequisite, PHYE 93 or permission of instructor. An intensive study of modern dance technique and philosophy, focusing on the physical principles of movement and their choreographic application. One hour seminar and 4\ hours laboratory. Fall and spring. Turner.

113 The Health Coordinator (3). Prerequisite, PHYE 78 or equivalent. An introduction to leadership skills required of local health coordinators. Emphasis is placed on practical work experience involving supervisory and facilitative responsibilities. Fall. Staff.

Department of Physics and Astronomy

Thomas B. Clegg, *Chair*

While those faculty members listed after each course may not be currently teaching that course, they are knowledgeable about the course and may be consulted for further details about it.

The Department offers a B.A. in astronomy, a B.S. in physics, and a B.A. in physics. The requirements for those degrees are outlined in the following two sections. A minor in astronomy and a minor in physics also are offered. Details of those minors are listed at the end of this departmental section.

Astronomy

The B.A. in astronomy is a liberal arts degree for students interested in obtaining a broad knowledge of space age astronomy and astrophysics. It encompasses a wide range of interests which the student may have, including: astronomy education, planetarium education or administration, museum education or administration, scientific journalism, astronautic and space sciences.

Generally, students who are committed to the pursuit of a graduate degree in astronomy are advised to seek the B.S. in physics as described in the next section. However, students who wish to preserve greater flexibility in their undergraduate program without ruling out the possibility of graduate work in astronomy may be advised to seek the B.A. degree. Consultation by all prospective majors with the astronomers of the department will be advantageous.

This program adheres to the regular requirements for the B.A. as specified. Candidates for this degree must complete all required courses in physics and astronomy with a grade of C or better.

The specific departmental requirements are: Mathematics 31, 32, 33, 83; Physics 26, 27 (or 24, 24L, 25, 25L with departmental permission), 28, 28L; one course from Physics 52, 103; one course from Physics 58, 107; two courses from Physics 61, 101, 105, 106, 108, 160, 161, 163; and the following Astronomy courses: Astronomy 31/31L and Astronomy 117 (or Astronomy 137) at the Freshman / Sophomore level, and Astronomy 137 (or Astronomy 117), Astronomy 142 and Astronomy 143 at the Junior/Senior level.

31 Descriptive Astronomy (3). No prerequisite. A study of the celestial sphere, time, earth, moon, artificial satellites, eclipses, sun, solar system, stars, the Milky Way, extragalactic systems and cosmogony. Fall and spring. Carney, Christiansen; staff.

31A Descriptive Astronomy (3). No prerequisite. An accelerated version of Astronomy 31 for Honors students. A study of the celestial sphere, time, earth, moon, artificial satellites, eclipses, sun, solar system, stars, the Milky Way, extragalactic systems and cosmogony. Fall. Christiansen.

31L Descriptive Astronomy Laboratory (1). Corequisite, Astronomy 31. Laboratory exercises, demonstration exercises and elementary calculations to illustrate methods used in astronomy. Some constellation study with occasional evening observations. Two laboratory hours a week. Fall and spring. Christiansen; staff. (Fee required.)

91, 92 Research and Special Topics for Juniors and Seniors (2 or 3 each). Permission of the instructor. To be taken by honors candidates and other qualified juniors and seniors. Fall and spring. Carney, Christiansen, Rose.

[1]**117 Cosmic Evolution** (3). Prerequisites, Mathematics 32 and Astronomy 31 (or permission). A course in stellar and planetary astrophysics with emphasis on astronomical conditions for the development and sustenance of life. Fall or spring. Christiansen; staff.

137 Observational Astronomy (4). Prerequisites, Astronomy 31 or 32, or permission of instructor. A course designed to familiarize the student with observational techniques in optical and radio astronomy, including application of photography, spectroscopy, photometry, and radio methods. Three lecture and three laboratory hours a week. Fall or spring. Rose; staff. (Laboratory fee required.)

142 Astrophysics I *(Stellar Astrophysics)* (3). Prerequisites, PHYS 28, MATH 83 or permission. An introduction to the study of stellar structure and evolution. Topics covered include observational techniques, stellar structure and energy transport, nuclear energy sources, evolution off the main-sequence, and supernovae. Fall. Carney, Cecil, Christiansen, Rose.

143 Astrophysics II *(Interstellar matter and galaxies)* (3). Prerequisites, PHYS 28, MATH 83 or permission. An introduction to the study of the structure and contents of galaxies. Topics covered include the interstellar medium, interstellar hydrodynamics, supersonic flow and shock formation, star formation, galactic evolution, the expanding universe and cosmology. Spring. Carney, Cecil, Christiansen, Rose.

Physics

Students may work toward either a B.S. degree in physics or a B.A. degree with physics as the major. Students planning to do graduate work in physics or astronomy will find the B.S. degree advantageous. Requirements for B.S. degree are listed under the first heading below. Candidates for these degrees must complete a total of 18 hours of work in advanced physics courses with a grade of C or better.

Candidates for a B.A. degree with physics as the major must satisfy the requirements of the College of Arts and Sciences, and must complete the following specific departmental requirements: Chemistry 11, 11L, 21, 21L; Mathematics 31, 32, 33, 83; Physics 26 and 27 (or Physics 24, 24L, 25 and 25L with departmental permission), 52 (or 103), 28, 28L, 58 (or 107); and three additional courses selected from Physics 61, 101 (or 141), 102, 104, 105, 106, 108, 113, 140, 144, 151, 160, 161, 163, 169; Astronomy 117, 137, 142, 143.

[1]Astronomy 117 is not to be taken for graduate credit by graduate students in Physics and Astronomy.

The department also offers an honors program for students majoring in physics. This program involves independent study and research (or advanced course work), and an oral presentation. Students who wish to enter the honors program should consult with their departmental advisers not later than the preregistration period in the spring semester of their junior year.

Students majoring in physics who are considering Marine Sciences as a graduate specialty should consult the material under "Curriculum in Marine Sciences."

Requirements for Bachelor of Science in Physics

[2](For freshman and sophomore years see "General College.")

Junior Year

Physics 104, 107, 108, 141 and two courses from Mathematics 108 (or Physics 191), 129 (or Physics 192).

Two free electives.

Senior Year

Physics 105, 106, 142L, 143L, 160 and 163.[3]
Two free electives.

20 Basic Concepts of Physics (4). No prerequisite. Basic principles of physics with introduction to quantum physics, atoms, nuclei, and relativity. Not to be taken for credit after Physics 21, 24 - 25, or 26 - 27. Three lecture and two laboratory hours a week. Fall and spring. Kessemeier; staff. (Laboratory fee required.)

24 General Physics (3). Corequisites, Physics 24L and Mathematics 30 or equivalent. Only one of Physics 24, 26, and 26A may be taken for credit. Three lecture hours a week. Fall.and spring. Rowan; staff.

24L General Physics Laboratory (1). Physics 24 as pre- or corequisite. Two laboratory hours a week. Fall. or spring. Briscoe; staff. (Fee required.)

25 General Physics (3) Prerequisites, Physics 24 and Physics 24L or permission. Corequisite, Physics 25L. Only one of Physics 25, 27, and 27A may be taken for credit. Three lecture hours a week. Spring and fall. Rowan; staff

25L General Physics Laboratory (1). Physics 25 as pre-or corequisite. Two laboratory hours a week. Spring and fall. Rowan; staff.

26 Mechanics (4). Prerequisite, Mathematics 31 or permission. Only one of Physics 24, 26, and 26A may be taken for credit. Mechanics of particles and rigid bodies. Newton's laws; conservation principles. Oscillatory and wave motion. Sound. Four hours lecture and recitation per week and two hours laboratory every second week. Fall and spring. Ludwig; staff. (Fee required.)

26A Mechanics (4). Honors section of Physics 26. Admission by permission of the Honors Dean or the Department. Only one of Physics 24, 26, and 26A may be taken for credit. Four hours lecture and recitation per week and laboratory every second week. Fall. Staff. (Fee required.)

27 Electromagnetism and Optics (4). Prerequisite, Physics 26. Only one of Physics 25, 27, and 27A may be taken for credit. Electricity and magnetism; Laws of Coulomb, Ampere and Faraday. Electromagnetic oscillations and waves. Light; diffraction and interference. Four hours lecture and recitation per week and two hours laboratory every second week. Fall and spring. Van Dam; staff. (Fee required.)

27A Electromagnetism and Optics (4). Honors section of Physics 27. Prerequisite, Physics 26A. Only one of Physics 25, 27, and 27A may be taken for credit. Four hours lecture and recitation per week and laboratory every second week. Spring. Slifkin; staff. (Fee required.)

28 Modern Physics (3). Prerequisite, Physics 25 or Physics 27, or permission of instructor. Corequisite Physics 28L. Special relativity theory, black body radiation, photons and electrons; wave particle duality. Elements of atomic theory, nuclei and fundamental particles. Three lecture hours a week. Fall and spring. Karwowski; staff.

28L Modern Physics Laboratory (1). Physics 28 as pre- or corequisite. Three laboratory hours a week. Fall and spring. Karwowski; staff. (Fee required.)

37 Science and Society (3). No prerequisite. A description of the scientific community and how scientists relate to such sociotechnical issues as the space program, the arms race, the energy problem, computer technology, medical technology, and pseudosciences. Spring. Schroeer.

52 Basic Mechanics (3). Prerequisites. Physics 24 (or 26) and Mathematics 32, or permission of the instructor. A one semester course in mathematics, statics, kinematics, simple harmonic motion, central forces and applications from modern physics. Spring. Shafroth; staff.

58 Basic Electricity and Magnetism (3). Prerequisites, Physics 25 (or 27) and Mathematics 33. Electric fields and potentials; dielectrics; steady currents; magnetic flux and magnetic materials; electromagnetic induction; emphasis on Maxwell's equations and their application to electromagnetic waves in bounded and unbounded media. Three lecture hours a week. Fall. Shafroth; staff.

61 Introduction to Numerical Techniques in Physics (4). Prerequisite, Physics 26 (or 25); corequisite, Mathematics 33. Applications of calculus, vector analysis, differential equations, complex numbers, and computer programming are made to realistic physical systems. Three lecture and two computational laboratory hours a week. Fall. Rowan; staff. (Fee required.)

84 Science, Technology and the Arms Race *(Peace, War, Defense 84)* (3). No prerequisites. The effect of modern scientific- technological developments on military strategy. Topics include nuclear weapons and their effects, arms control; nuclear and chemical-biological weapons proliferation, conventional high-technology weapons. Fall. Schroeer.

91, 92 Research and Special Topics for Juniors and Seniors (2 or 3 each). To be taken by honors candidates and other qualified juniors and seniors. Fall and spring. Briscoe, Christiansen; staff.

93 Senior Seminar (2 or 3). To be taken by seniors with permission of department adviser. Upon demand. Briscoe; staff.

101 Introductory Electronics I (3). Prerequisites, introductory physics and Mathematics 31 or permission of the instructor. This course is designed to give students a sound working knowledge of basic electronic principles. Physics 101 and 141 may not both be taken for credit. Three lecture and three laboratory hours a week. Fall. Superfine. (Laboratory fee required.)

102 Introductory Electronics II (4). Prerequisite, Physics 101 or permission of the instructor. This course, which is based directly on Physics 101, emphasizes digital electronics including Boolean algebra, logic gates, flip-flops, counters, storage registers, ADCs, DACs and applications. An introduction to microprocessors. Three lecture and three laboratory hours a week. Spring. Superfine; staff. (Laboratory fee required.)

[2] Most students will find it advantageous to defer some of the General College Perspectives requirements to the junior and/or senior year(s).

[3] Various substitutions can be made, with the approval of the student's adviser, for required physics courses in the Sophomore, Junior and Senior years. Physics 181 and/or 182 may be substituted for other laboratory courses (Physics 141, 142, 143, 142L, 143L), and courses chosen from Physics 102, 161, 169, 191, 192 and Astronomy may be substituted for courses chosen from Physics 61, 104, 105, 106, 108, 143L and 163.

103 Mechanics I[4] (3). Prerequisites, Physics 27 (or permission) and Mathematics 33. Particle kinematics, Central forces, planetary motion. Systems of particles and conservation laws. Statics. Motion of rigid bodies. Constrained motion. Wave motion. Wave motion on string. Spring. Hernandez; staff.

104 Mechanics II[4] (3). Prerequisite, Physics 103. Deformable bodies and wave motion. Lagrange's and Hamilton's equations, Euler's equations, small oscillations, normal coordinates. Fall. Washburn; staff.

105 Heat and Thermodynamics (3). Prerequisite 27 (or 25 by permission) and Mathematics 33. Equilibrium statistical mechanics; the thermodynamic laws, internal energy, enthalpy, entropy, thermodynamic potentials, Maxwell's equations. Fall. Wu; staff.

106 Optics (3). Prerequisites, Physics 107 and 108 (or 58 by permission). Elements of geometrical optics; Huygens' principles, interference, diffraction, and polarization. Elements of the electromagnetic theory of light; Fresnel's equations, dispersion, absorption, and scattering. Photons. Lasers and quantum optics. Spring. McNeil; staff.

107, 108 Electricity and Magnetism[4] (3 each). Prerequisites, Physics 27 and Mathematics 83 (or permission). Brief treatment of DC and AC circuit theory. Electrostatics: dielectrics; the magnetic field; magnetic materials. Maxwell's equations and their application to electromagnetic waves. Fall and spring. Schroeer; staff.

113 Space and Time in Physics and Philosophy[4] (Philosophy 121) (3). Contingent and necessary properties of space and time. The direction and flow of time. Fatalism. Effects preceding their causes. Spring. Van Dam; staff.

140 Physics of Solid State Electronic Devices (3). Prerequisite, Physics 27. Corequisite or prerequisite, Physics 58 or 107. Properties of crystal lattices, electrons in energy bands, behavior of majority and minority charge carriers, p-n junctions related to the structure and function of semiconductor diodes, transistors, display devices. Fall. Liu; staff.

141 Electronics (4). Prerequisite, Physics 27 (or 58). Mathematics 83. Basic electronics with emphasis on circuitry, DC and AC circuits, diodes and application, transistors, amplifiers, wave form generators, operational amplifiers, digital electronics, transmission lines. Physics 101 and 141 may not both be taken for credit. Three lecture and three laboratory hours a week. Fall. Kessemeier. (Fee required.)

142L, 143L Intermediate Laboratory I and II (2 each). Prerequisite, Physics 141 or permission. Selected experiments illustrating modern techniques such as the use of laser technology to study the interaction of electromagnetic fields and matter. Six laboratory hours a week. Spring and fall. Briscoe; staff. (Laboratory fee required.)

144 Chemistry and Physics of Electronic Materials Processing *(Chemistry 192)* (3). Prerequisites, Chemistry 182 or Physics 27 and permission of the instructor. A survey of materials processing and characterization used in fabricating microelectronic devices. Crystal growth, thin film deposition and etching, and microlithography. Spring. Washburn; staff.

148L Materials Laboratory I *(Applied Sciences 144L)* (2). Corequisite, Chemistry 190 or Applied Sciences 141. Structure determination and measurement of the optical, electrical, and magnetic properties of solids. Fall. Briscoe, McNeil, Propst, Smith.

149L Materials Laboratory II *(Applied Sciences 145L)* (2). Prerequisite, Physics 148 or Applied Sciences 144L. Continuation of Physics 148 with emphasis on low- and high-temperature behavior, the physical and chemical behavior of lattice imperfections and amorphous materials, and the nature of radiation damage. Spring. Briscoe, McNeil, Propst.

151 Fluid Dynamics *(Marine Sciences 151)* (3). Prerequisite, Physics 103 or permission. The physical properties of fluids, kinematics, governing equations, viscous incompressible flow, vorticity dynamics, boundary layers, irrotational incompressible flow. Fall. Shay.

160 Introduction to Quantum Mechanics (3). Prerequisites, Physics 103 or 108, or permission. Origins of quantum theory. Uncertainty principle. Schroedinger equation for simple systems, including hydrogen atom. Perturbation theory. Spin. Identical particles. Spring. Hubbard; staff.

161 Nuclear Physics (3). Prerequisite, Physics 160 or equivalent. Nuclear structure, nuclear reactions, experimental techniques of producing and studying nuclear particles; models of the nucleus; nuclear forces. Spring. Ludwig; staff.

163 Applications of Quantum Mechanics (3). Prerequisite, Physics 160. Emphasizes atomic physics but includes topics from nuclear, solid state and particle physics, such as energy levels, the periodic system, selection rules, and fundamentals of spectroscopy. Fall. Frampton; staff.

169 Introductory Solid State Physics (3). Prerequisite, Physics 160 or equivalent. Crystal symmetry, types of crystalline solids; electron and mechanical waves in crystals, electrical and magnetic properties of solids, semiconductors; low temperature phenomena; imperfections in nearly perfect crystals. Fall. Lu; staff.

181, 182 Advanced Laboratory (3 each). Prerequisites, Physics 103, 108, or permission. Six laboratory hours a week. Fall and spring. Kessemeier; staff. (Laboratory fee required.)

191 Mathematical Methods of Theoretical Physics I (3). Prerequisites, Physics 28, or equivalent; Mathematics 83. Vector fields, curvilinear coordinates, functions of complex variables, linear differential equations of second order, Fourier series, integral transforms, delta sequence. Fall. Hubbard; staff.

192 Mathematical Methods of Theoretical Physics II (3). Prerequisites, Physics 191 or permission. Partial differential equations, special functions, Green functions, variational methods, traveling waves and scattering. Spring. Hubbard; staff.

193 Scientific Programming (3). Prerequisites, Mathematics 108 or 129, or Physics 191 or 192; elementary Fortran, PL/1 or Pascal programming. Structured programming in Fortran or Pascal; use of secondary storage and program packages; numerical methods for advanced problems, error propagation and computational efficiency; symbolic mathematics by computer. Spring. Thompson.

Minor in Physics and Minor in Astronomy

The minor in physics consists of five courses (Track 1 or Track 2):

Track 1

PHYS 24 and 24L
PHYS 25 and 25L
PHYS 28 and 28L

Two PHYS courses numbered above 50 which have as prerequisites one or more of the three courses listed above.

Track 2

PHYS 26
PHYS 27
PHYS 28 and 28L

Two PHYS courses numbered above 50 which have as prerequisites one or more of the three courses listed above.

[4]Physics 103 - 104 and 107 - 113 are not to be taken for graduate credit by graduate students in physics.

The minor in astronomy consists of five courses: ASTR 31 and 31L, PHYS 20, and three ASTR courses numbered above 100.

Note: Physics majors are NOT allowed to elect a minor in astronomy and astronomy majors are NOT allowed to elect a minor in physics.

Menu of courses suggested for satisfying the physics minor requirements:

PHYS 52
PHYS 58
PHYS 61
PHYS 101
PHYS 105
PHYS 191*
PHYS 140
PHYS 141*
PHYS 103*
PHYS 107*

*Open only to students who have completed PHYS 26, 27, and 28.

Menu of courses suggested for satisfying the astronomy minor requirements:

ASTR 117 ASTR 137 ASTR 142 ASTR 143

Department of Physiology

Stanley C. Froehner, *Chair*

The Department of Physiology offers courses to undergraduate students but does not offer a formal major leading to a degree. Courses are available to premedical, predental, nursing, pharmacy, physical therapy, and allied health students as well as to students pursuing science majors. Students interested in research may register for PHYI 98, "Undergraduate Research in Physiology"a directed readings or laboratory study.

90 Basic Physiology (4). Prerequisites, Chemistry 11 and 21 or Biochemistry 7 and 8, Biology 45, or equivalents. A course in basic human physiology with an appreciation for its clinical relevance and application. Required of radiologic science majors and available to other students by permission of the instructor. Three lecture and two laboratory-conference hours a week. Spring. Davis.

92 Introduction to Physiology (5). Prerequisites, Chemistry 11 and 21 or Biochemistry 7 and 8, Biology 45, or equivalents. A course in basic human physiology with an appreciation for its clinical application. Emphasis is on body fluids, various organ systems and their interrelationships. Required of all nursing students and available to other students by permission of the instructor. Four lecture and two recitation hours a week. Spring. Glasser; staff.

93 Introduction to Physiology (4). Prerequisites, Chemistry 11 and 21, Biology 45, or equivalents. A general course in mammalian physiology with emphasis on the various organ systems and their interrelationships. Required of all pharmacy students and available to other students by permission of the instructor. Three lecture and two recitation hours a week. Fall. Whitsel; staff.

94 Introduction to Physiology (5). Prerequisites, Chemistry 11 and 21, Biology 45, or equivalents. A course in basic human physiology with an appreciation for its clinical relevance and application. Required of physical therapy students and available to other students by permission of the instructor. Four lecture and two laboratory-conference hours a week. Fall. Whitsel; staff.

98 Undergraduate Research in Physiology (1 - 3). Prerequisites, Biology 11, 11L, Chemistry 11, 11L, an overall 3.0 GPA, and permission of the instructor. Directed readings or laboratory study on a selected topic. Final written report required in each term. At least three hours of independent work per week for each unit of credit. Fall, spring, and summer. Millhorn; staff.

111 Biomedical Instrumentation I *(Biomedical Engineering-Biomedical Mathematics 111)* (3). Prerequisites, Physics 101 or equivalent, Physics 102 corequisite, and permission of the instructor. Topics include analysis of medical instrumentation with emphasis on pressure, flow, bioelectric, and ultrasonic transducers. This course includes a laboratory and interfacing microprocessors with transducers. Students are given the opportunity to design and fabricate original devices. Spring. Hsiao, Buchanan.

122 Developmental Neurobiology *(Cell Biology and Anatomy 122, Neurobiology 122)* (3). Prerequisite, permission of the instructor. A comprehensive overview of nervous system development including detailed analysis of selected research topics in developmental neuroanatomy. Spring, alternate years beginning 1993. Lauder, Farel, Willard.

140 Cell and Organ System Physiology *(Neurobiology 140)* (5). Prerequisite, a course in biochemistry and permission of the instructor. This course covers the functions of mammalian organs and the underlying electrical, mechanical, cellular and molecular mechanisms in a lecture/recitation format. Fall. Sealock; staff.

Department of Political Science

David L. Lowery, *Chair*

Political Science is concerned with the description and explanation of political institutions and behavior, the rights and responsibilities of citizens, and the relations of people with their governments. The curriculum provides the student with a broad knowledge of both domestic and foreign political institutions, processes and problems. The undergraduate major is designed to make feasible the attainment of several objectives: (1) a broad understanding of political institutions and issues as the central element of a general education; (2) a basic knowledge of governmental techniques for those considering a career in public service; (3) preprofessional training for students planning to enter a law school; and (4) a basic foundation in Political Science for those contemplating specialization at the graduate level.

To graduate with a major in political science, a student must pass at least eight courses offered by the Department, with a grade of C or better in six courses. A maximum of six hours can be taken from the grouping 96 and 99. The major must also pass an introductory economics (ECON 10) and sociology (SOC 10, 11, 12, 100, 101, and 102) course.

Political Science 41 can be counted as part of the major and General College, while the remaining courses are counted in the upper college.

The courses offered by the Department are divided into a number of requirements and electives. Each student must take the introductory course in American government (Political Science 41), in international relations (Political Science 86), one lower level course in comparative politics (Political Science 50, 51, 52, 53, 54, 55, 56, 57, 59, 60), and one course in political theory (Political Science 61, 62, 63, 64, 65, 68, 161, 162, 163, 164, 165, 166, 168). The remaining courses are left wholly to the discretion of the student and can be taken from any of the department's undergraduate offerings. It is suggested that, whenever possible, students take the introductory courses in any of the subfields (comparative, international, American, theory, etc.) before taking more advanced courses.

The Honors Program

The Honors Program provides Political Science majors the opportunity to pursue an independent research project over a two-semester period. Students begin the program by taking Political Science 91, Honors Seminar in Research Design, in the spring semester of their junior year. During this course they complete the first chapter of the proposed thesis.

If the first chapter is acceptable, students continue their thesis research in the senior year under the direction of a faculty adviser in Political Science 92. Upon successful completion of the program, which includes an oral defense of the thesis, students are awarded a degree "with Honors"or "with Highest Honors in Political Science."

To be admitted to the Honors Program students must have at least a 3.2 overall grade point average and 3.5 in Political Science. They should have completed four courses in the major. Students interested in participating in the Honors Program should contact the Director of Political Science Honors during the first semester of their junior year.

Training for Public Service

The undergraduate major in political science provides a sound foundation for professional master's programs in public administration such as that offered in our department and at many other universities. For students planning to enter the public service, regardless of undergraduate major, the following courses are recommended consistent with other college requirements: Political Science 41, Economics 10, Psychology 10, Political Science 77, English 30, and Statistics.

41 Introduction to Government in the United States (3). An introductory course designed to explain the basic processes and issues of the American political system. Fall and spring. Beyle, Keech, Lipsitz, Rabinowitz, Richardson, Sullivan, Swift.

42 State and Local Government in the United States (3). An introductory course on the government, politics, and policies at the state and local levels of the U.S. Federal system. Fall and spring. Beyle, Dehoog, Wright.

43 Urban Politics (3). An examination of the nature and scope of urban problems in the United States, with emphasis on the impact of government and politics. Fall or spring. Staff.

44 Black Politics in America (3). Examines the political, economic, and social position of the Black community and how these variables have constrained the development of Black political power; relates the theory and structure of American political institutions to the efforts made by Blacks in recent times to organize for effective political action. Fall or spring. Staff.

45 An Introduction to the Nature and Function of Law (3). A nontechnical course for students of the arts and sciences with a social science approach to the examination of the nature, sources and functions of law. Spring. Staff, Rees.

49 Defense Policy and National Security *(Aerospace 149, PWAD 149)* (3). National defense policy, including strategy, weapons systems, and the bureaucracies/organizations that deal with them. Lectures and discussion sections. Fall. Rupen with Naval and Air Force ROTC officers.

51 Contemporary German Studies: An Interdisciplinary Seminar *(German 90, History 93)* (3). See German 90 for description.

52 Introduction to Politics in Western Europe (3). A treatment of the political institutions and processes of Western European democracies, with special attention to France, Germany, England, and Italy. Fall and spring. Marks, Steiner, Stern, White.

53 Politics in England (3). An introduction to contemporary English politics emphasizing the political battle between Socialist and Conservative ideologies. Fall. Searing.

54 Government and Politics of East Asia (3). The indigenous political ideas and institutions of East Asia and Western influence on Asian government and politics with emphasis upon the political evolution and contemporary governments of Japan, China and Vietnam. Fall. White.

55 Dissolution and Collapse of the Soviet Political System (3). Factors and forces that explain the rise and demise of the Soviet political system and consideration of what political configurations in that area. Fall, spring. Schwartz, Hicks.

56 Contemporary Latin American Politics (3). An introduction to contemporary political conditions in Latin America, including consideration of leading theoretical explanations. Country emphasis varies with instructor. Fall and spring. Schoultz.

57 Politics of East-Central Europe (3). Examines contemporary politics in East-Central Europe by looking at the communist period, the 1989 revolutions, and the political, economic, and social transformations underway in the area. Fall, spring. Hicks.

59 Contemporary Africa (3). Examines the development and operation of the political systems of contemporary Africa, emphasizing the period since independence and giving primary attention to sub-Sahara Africa. Fall. Newbury.

60 Political Change and Modernization (3). An overview of politics and government in the Third World, emphasizing characteristics, problems, and solutions (successful and otherwise) common to nations making the attempt to modernize. Fall or spring. White.

61 Major Issues in Political Theory (3). An examination of major issues in political thought, including: equality; obedience; violence and nonviolence; justice; forms of social, economic and political life; liberty; and human nature and politics. Spring. Donnelly, Leonard, Lipsitz, Obler.

62 Introduction to Political Thought: American Political Theory (3). A survey course in American political ideas from the seventeenth century to the present, with emphasis on the role of politics, society, and economy in American thought. Fall. Lienesch.

63 Introduction to Political Thought - Ancient and Medieval (3). Survey designed to introduce students to major political thinkers and ideas of the ancient world and of the medieval period. Fall. Lienesch; staff.

64 Introduction to Political Thought - Modern (3). Survey course designed to introduce students to major political thinkers and schools of thought dating roughly from the 16th century to the present. Spring. Leonard, Lipsitz, Lienesch.

65 African-American Political Thought (3). A consideration of the political thought of African-Americans, particularly within the context of the broader spectrum of American political thought, and both as reaction and contribution to that thought. Fall, spring. Staff.

66 Political Psychology: An Introduction (3). Findings of the behavioral sciences are examined on: human nature, community, political socialization, alienation, mass movements, belief systems and personality in politics. Spring. Searing, Lipsitz.

68 The Ethics of Peace, War, and Defense *(Philosophy 42)* (3). (See Philosophy 42 for description.)

69 Personality and Political Aggression *(PWAD 69)* (3). Personal origins of political aggression, their expression at the group and individual level, possibilities for limitations by public policy. Spring. Stern.

70 Public Opinion and Political Participation (3). A study of forces affecting public opinion and its expressing in various political activities; the personal needs served by political participation and the effect of formal political institutions and social structure upon such participation. Fall. Staff.

71 Introduction to Public Policy Analysis *(Economics 71, Sociology 71, and Public Policy Analysis 71 PWAD 72)* (3). Introduction to the elements of policy analysis by citizens, including definition of problems, criteria, alternatives, models, decision procedures, and political feasibility; illustrated by case studies. Fall. MacRae.

72 Women and Politics *(Women's Studies 72)* (3). A comparison of men and women as political actors at the mass and elite level in America. Topics considered include: the "gender gap," the women's movement, abortion, and the E.R.A. Spring. Conover.

74 Political Feasibility in Policy Analysis (3). Assessment of feasibility of chosen policies, including possibility of enactment and implementation; determining clearance points, predicting behavior of decision makers, building support, assessing rhetoric. Spring. Whitaker; staff.

75 Political Parties and Elections (3). An analysis of the dynamics of party alignment, realignment and of nomination and election to public office in American national government. Fall and spring. Conover.

76 Power and Politicians (3). An examination of political activists and politicians - who they are, what they believe, why they believe it, and what difference it makes for public policy. Spring. Searing.

77 Introduction to Public Administration (3). Problems of the public service; internal dynamics of public organizations; acquisition and allocation of public funds; the roles of bureaucracy in relation to public policy, clients, the citizenry, and society. Fall and spring. DeHoog, Lowery, Whitaker.

79 Principles of Policy Analysis *(Public Policy Analysis 79 and Sociology 79)* (3). A synthesis of principles of policy analysis through work on individual or team projects. A prior course in statistics as well as Political Science 71 (PUPA 71\Poli. Sci. 71\Econ. 71\Sociology 71) are recommended. Spring. MacRae, staff.

80 The President, Congress, and Public Policy (3). An analysis of the roles and influence of the President, the Congress, and other participants in the making of national policy. Fall and spring. Sullivan, Swift.

81 International Politics of Third World Development (3). North-South economic relations. The role of international forces in economic and political underdevelopment in the Third World. Fall, spring. Coleman.

82 Evolution of the International System *(PWAD 82)* (3). An examination of changes in the nature of the international system from about 1870 to the present, emphasizing changing patterns of alliance politics and crisis behavior. Fall and spring. Snyder.

83 The Middle East in World Politics (3). A study of the contemporary international relations of the Middle East, including an analysis of country, regional, and global factors shaping the foreign relations of Middle East states and nonstate actors. Emphasis on problems of war, diplomacy, and peace in the Arab-Israeli and Persian Gulf areas since World War II. Fall. Staff.

84 The Political Left and Jewishness (3). An examination of attitudes of leftist political movements toward issues of anti-Semitism, Jewish assimilation, cultural autonomy, nationalism, and Zionism. Spring. Schwartz.

85 Asia and World Affairs (3). A survey of relations between the United States and major Asian powers: China, the USSR, Japan. Spring. Chi.

86 International Relations and World Politics (3). The analysis of politics among nations. Fall and spring. Chi, Donnelly, McKeown, Obler, Scott.

87 Latin America and the United States in World Politics *(PWAD 87)* (3). A survey of the events, institutions, and issues that have dominated relations between Latin America and the United States. Schoultz, Hartlyn.

88 International Organizations and Global Issues (3). Examines international organizations and their relationships with and impact upon international politics, international law, and selected global issues. Fall and spring. Staff.

89 Great Decisions (2). Major issues of contemporary international relations, in conjunction with the Great Decisions lecture series. May be repeated for credit once unless credit has already been received for International Studies 93. May not be taken in the same semester as International Studies 93. Spring. Staff.

91, 92 Honors Course (6). Required of all students reading for honors in Political Science. S. Macdonald.

94 Practicum in Policy Analysis *(PLAN 94, Public Policy Analysis 94)* (3). For senior Public Policy Analysis, majors and other senior level students having a strong background and/or interest in the rationale, justification and techniques of, and difficulties encountered in choosing appropriate public policies for defined public problems. The course involves an in-depth analysis of a public policy problem by each member of the class. Spring. Staff.

94A Psychoanalysis and the Social Sciences (3). An interdisciplinary examination of the evolution of psychoanalytic theory and methods and their application to such questions as leadership, socialization and group behavior. Spring. Stern.

94B Theory and Practice of Representative Government (3). Theories of representative government with special emphasis upon those derived from modern social choice theory. Fall or spring. Keech.

94C Politics and Literature (3). Prerequisite: One political science course other than Poli. Sci. 41 or any literature course. Models of politics available in literature, literature as political activity, sociopolitical aspects of literary criticism. Draws from English and other literature in translation. Fall and spring. Lipsitz.

94E Religion and Politics (3). Considers the theoretical and philosophical content of the relationship between religion and politics. Special attention is given to the American experience, using

historical and contemporary sources. Spring. Lienesch. 94F The Political Community (3). This course will address a series of questions about relationships between citizens and their political communities. Topics include human nature, obligation, liberty, participation leadership, and political utopias. Fall. Searing, Conover.

95 Undergraduate Seminar (3). A detailed examination of selected topics in the field of Political Science. Staff.

96 Practicum in State Government (3). Designed to give students experience in the legislative or executive branches of state government. The course will provide the structure for an in-depth study of several contemporary issues facing state government. Fall, spring. Beyle.

99 Independent Study in Political Science (Var.). Permission of Director of Undergraduate Studies. Readings and research under the supervision of a member of the Department. Open to Political Science majors. Fall and spring. Staff.

102 Urban Political Systems (3). Characteristics, political processes, and actor behavior in urban political systems. Spring. DeHoog, Whitaker.

110 Politics and Literature (3). Prerequisite, one political science course other than Political Science 41 or any literature course. Models of politics available in literature and literature as political activity. Draws from English and other literature in translation. Spring. Lienesch, Lipsitz.

116 Politics of Mexico, Central America, and the Caribbean (3). Prerequisite, Poli. Sci. 156 or permission of instructor. The analysis of politics in Mexico, Central America, and the Caribbean. Fall or spring. Coleman, Hartlyn, Huber.

117 Political Economy I: The Domestic System (3). Problems of the national government in managing capitalist development and economic growth; political constraints; patterns of conflict among domestic actors. Fall. Staff.

120 Politics of South America (3). Prerequisite, Poli. Sci. 56 or permission of instructor. Analysis of politics in South America. Fall or spring. Coleman, Hartlyn, Huber.

121 Collapse of Communist Rule in the USSR and Eastern Europe (3). Looks at factors on the domestic, bloc, and international levels to evaluate competing explanations of the collapse of communist rule in the Soviet Union and Eastern Europe. Fall. Hicks.

122 Politics and Society in the U.S. and the Soviet Union. (3). Prerequisite, Political Science 55 or equivalent, History 31, Economics 168, or Sociology 152. An examination of selected aspects of politics and society in the USA and USSR; focusing upon differences and similarities and their underlying causes. Fall. Schwartz.

123 Government and Politics in Japan (3). Examines the Japanese political process in the period since World War II with emphasis on popular culture and behavior, and on governmental policy making in both domestic and foreign affairs. Previous coursework on East Asia recommended but not required. Spring. White.

124 Communism in Asia (3). This course deals primarily with Russian-Chinese relations but also analyzes the USSR in Asia and the borderlands of Sinkiang and Mongolia. Spring. Rupen.

125 Contemporary China - Government and Politics (3). Examines the development of the political system of China with particular emphasis on its historical, social and cultural dimensions. Fall. Chi.

126 Politics and Society in Africa (3). Prerequisite, Poli. Sci. 59 or 60 or African Studies 60. Comparative analysis of state-society relations in selected postcolonial African countries. Spring. Newbury.

127 Democracy and Development in Latin Anmerica (3). Prerequisite, Poli. Sci. 56 or permission of instructor. The analysis of central issues of democracy and development in Latin America. Fall or spring. Coleman, Hartlyn, Huber.

128 European Politics (3). Prerequisite, Poli. Sci. 52. Deals with the major and some of the smaller European countries. Discussion of current events; theoretical work; partly in small groups. Fall. Steiner.

129 Germany in European Politics (3). Prerequisites, 52 or permission of instructor. An examination of the role of postwar Germany in Europe; the German question and the special relationship between the two German states; comparison of the Federal Republic and the German Democratic Republic. Fall, spring. Staff.

130 Southern Africa in Conflict (3). Prerequisite, Poli. Sci. 86 or 59 or permission of the instructor. The problems of race, class, and ideology are explored in the countries south of the Zambesi River along with the political and economic ties that bind these countries. Spring. Staff.

132 Health Systems and Political Systems (3). An examination of the impact of politics and ideology of the organization, and delivery of medical care services in the U.S., Great Britain, and the U.S.S.R. Spring. Schwartz.

133 Politics of Macroeconomic Policy (3). Prerequisite, Economics 10. The effects of political considerations on macroeconomic policymaking, and the effects of economic variables on voting and popular support for incumbents. Fall or spring. Keech, Lowery.

134 North Carolina Politics and Public Policy (3). An intensive study of politics, government and public policy in the state of North Carolina. Emphasis is placed on student research projects, with a major paper the main requirement. Fall. Beyle, Howes.

135 State Politics and Public Policy (3). The comparison of development and implementation of public policy in the states. Special emphasis is placed on the impact of the political process and intergovernmental relations. Spring. Beyle.

136 South in National Politics (3). This course analyzes the important roles played by the South in national politics. Topics include the South in presidential elections and the roles played by southerners in the U.S. House and U.S. Senate. Fall. Staff.

138 Power, Morality, and Foreign Policy *(PWAD 138)* (3). Prerequisite, Poli. Sci. 86 or permission of instructor. To what extent can, and should, moral concerns be integrated into national foreign policies - An examination of theoretical alternatives as well as selected substantive issues (e.g., human rights, just war, food policy, development assistance). Fall. Donnelly.

140 International Political Economy (3). Theories of international political economy; major trends in international economic relations; selected contemporary policy issues. Prerequisites, Poli. Sci. 86 and ECON 10. Fall. Donnelly, McKeown.

141 Theories of War and Peace *(PWAD 141)* (3). Prerequisite, Poli. Sci. 86 or permission of instructor. Theories of international relations, with emphasis on the role of force, causes of conflict, and conditions of cooperation. Fall or spring. Donnelly. 142 Quantitative International Relations (3). Prerequisite, Poli. Sci. 86 or permission of instructor. The use of quantitative theory, methods and data in analzying international relations and forecasting conflict and cooperation. Spring. Staff.

143 Contemporary Problems of Soviet Foreign Policy (3). Prerequisite, Poli. Sci. 86 or permission of instructor. General propositions about contemporary foreign relations of the USSR will be examined through analysis of selected case studies. Fall or spring. Rupen.

144 American Foreign Policy: Formulation and Conduct (3). Prerequisite, Poli. Sci. 86 or permission of the instructor. The role of Congress, the press, public opinion, the President, the Secretary and the Department of State, the military, and the intelligence community in making American foreign policy. Emphasis is placed on the impact of the bureaucratic process on the content of foreign policy. Fall and spring. Scott.

145 Contemporary International Relations of the United States (3). Prerequisite, Poli. Sci. 86 or permission of instructor. A study of selected United States foreign policy problems since World War II; analysis of the process of policy formulation, and the impact of the external environment and domestic policies on the White House and Department of State. Spring. Staff.

146 International Communications and Comparative Journalism *(JOMC 146)* (3). Prerequisite, six semester hours of upper-division courses in international relations or recent European history. Fall. Adams.

147 Contemporary Inter-American Relations *(Peace, War and Defense 147)* (3). Prerequisite, POLI 87. A comprehensive analysis of hemispheric international relations and foreign policies of individual Latin American nations. Spring. Schoultz.

149 Defense Policy and National Security (3). Prerequisite, Poli. Sci. 86 or permission of instructor. A study of national defense policy as affected by the constitutional and political setting, as well as its relation to foreign policy. Some attention to strategic doctrine. Rupen.

150 European Foreign Politics (3). Prerequisite, Poli. Sci. 52 or 86 or permission of instructor. Foreign policies of European countries towards each other, the superpowers, NATO, the European Community, and the developing countries. Snyder.

151 The Adversary System of Criminal Justice *(ADJU 100)* (3). (All other information remains the same as former ADJU 100).

152 Law Enforcement in a Democratic Society *(ADJU 102)* (3). (All other information remains the same as former ADJU 102).

153 Constitutional Policies and the Judicial Process *(PWAD 154)* (3). Analysis of the structure and functions of judicial systems emphasizing the organization, administration, and politics of judicial bureaucracies and roles of judges, juries, counsel, litigants, and interested groups in adjudication processes. Fall. Richardson.

155 The Constitution of the United States *(History 175)* (3). A study of the fundamental principles of constitutional interpretation and practice in the United States by means of lectures, textbooks, and cases. Emphasis will be on the political context surrounding and the impact following Supreme Court decisions. Fall and spring. Bruer.

156 Junior/Senior Seminar in Law and Justice *(ADJU 104)* (3). Advanced topics of varying focus, taught in seminar format for students who have completed appropriate background coursework. Permission of instructor is required. Spring. Staff.

157 Civil Liberties Under the Constitution (3). An analysis of the complex political problems created by the expansion of protection for individual liberties in the United States. Emphasis will be on contemporary problems with some supplemental historical background. Spring. Staff.

158 The Problems of Change in Correctional Administration *(ADJU 103)* (3). An analysis of the political, legal, and administrative problems involved in effecting changes in correctional administration. Fall and spring.

159 Criminal Law Development and Administration *(ADJU 101)* (3). Analysis of problems in defining, invoking, and administering criminal law as a governmental process.

161 Social and Political Philosophy (3). An examination of the logic of social and political thought with an analysis of such concepts as society, state, power, authority, freedom, social and political obligation, law, rights. Spring. Obler.

162 American Political Thought (3). A historical and analytic examination of the ideas underlying the the political culture and institutions of the United States. Spring. Lienesch.

163 Marxism and Socialism (3). A consideration of the political thought of major Marxist and socialist schools, including Marxism, Leninism, contemporary Democratic and Revolutionary socialism - with reference to Utopian socialism, and recent controversies on the left. Fall. Lipsitz.

164 Feminism and Political Theory *(WMST 164)* (3). Introduction to feminist theory and its implications for the study and practice of political theory. Topics: Women in feminist critiques of the western political tradition, schools of feminist political theory. Fall, spring, summer. Leonard.

165 Problems of Modern Democratic Theory (3). Major problem areas in democratic theory including definitions, presuppositions, and justifications of democracy, liberty, equality, minority rights, public interest, participation, dissent, and civil disobedience. Fall. Lipsitz, Lienesch, Keech.

166 Recent Contemporary Political Thought (3). Survey of the historical foundations, central tenets, and political consequences of prominent twentieth century political theories. Topics include: contemporary liberalism and Marxism, fascism, theories of development populism, feminism. Fall or spring. Leonard.

167 Advanced Political Psychology (3). Prerequisites, Poli. Sci. 66, 69 or 94A. Examines in greater depth issues in the field of political psychology, including conflict and conflict resolution, socialization, attitude formation, mass movements, leader-follower relationships, and psychobiography. Spring. Lipsitz.

168 Recent Developments in Political Philosophy (3). A study of selected recent works of Continental or Anglo-American political theory by authors such as Rawls, Nozick, Walzer, Habermas and Gadamer. Fall or spring. Donnelly, Leonard.

169 Theory and Practice of Representative Government (3). Theories of representative government with special emphasis on those derived from modern social choice theory. Keech.

170 U.S. National Elections (3). Course studies U.S. Presidential and Congressional elections. Emphasis on individual vote, changing party strengths, and the relation of outcomes to policy. Spring. G. Rabinowitz.

171 Race, Poverty, and Politics *(HUSA 171)* (3). Definitions of poverty and their policy implications; the composition and causation of poverty; an examination of public policies directed at the alleviation, reduction, and elimination of poverty. Fall. Schwartz.

172 Executive Politics (3). This course explores how presidents select policy options, how they decide timing, what shapes their congressional support, and how they build successful coalitions. Spring. Sullivan.

173 Government and the Environment (3). Examines political implications of environmental problems; environmental policymaking and implementation processes in the U.S., and management problems in selected policy areas such as population, energy, pollution, the ocean, land, hazardous waste, wilderness areas. Fall. Staff.

174 Mass Media and American Politics (3). Prerequisites, Junior-Senior standing and Political Science 41. Examination of the role, behavior, and influence on the mass media in American politics.

175 Quantitative Analysis for Public Policy *(PLAN 175, Public Policy Analysis 175)* (3). Prerequisite, Statistics 11; Economics 70 or equivalent. Application of statistical techniques, including regression analysis, in public policy program evaluation; research design and data collection and management. Spring. Staff.

176 International Law (3). Prerequisite, Poli. Sci. 86 or permission of instructor. The place of international law in the international political system; traditional substantive issues (e.g., recognition, laws of war, intervention); selected new issues; hypothetical cases/problems. Emphasis on relation between law and politics. Spring. Donnelly.

177 Administrative Law Development and Applications (3). Analysis of problems in defining, invoking, and applying administrative law at the federal and state level; rulemaking, administrative adjudication, and judicial review. Spring. Allred.

179 Science and Policy *(Sociology 133, Public Policy Analysis 179)* (3). The problems of using expert knowledge in democratic policy formation. These relate to communication within scientific disciplines; scientists' values; and the use of scientific information and personnel in decision making. Spring. MacRae, Schroeer.

180 Formal Models of Political System (3). An introduction to the use of mathematical models for analyzing political behavior. Fall and spring. McKeown.

191 Introduction to Public Finance *(Economics 140)* (3). Principles and practices of the budgetary activities of American governments - federal, state, and local. Students may not receive credit for both Econ. 140 and 141. Akin, Wertz, Wilde.

Portuguese

(See Romance Languages)

Department of Psychology

David Galinsky, *Chair*

In the undergraduate study of psychology, the emphasis is not on specialization but rather upon a broad acquaintance with the behavioral sciences. The subject matter is preparatory to a career in psychology either in basic research and teaching, or in any number of professional applications to various human problems. A psychology major also may prove valuable to those planning other professional careers, such as medicine, law, education, or business, as well as to those who seek a broad cultural background in the behavioral sciences.

The courses in the Department available to undergraduate students are listed on the following pages. *No courses numbered 200 or above may be taken by undergraduate students except under special circumstances.* As indicated, some courses in this listing will only be offered in alternate years; consult the current Class Schedule for each semester's offerings. Psychology 10 is prerequisite to ALL other courses offered in the Department of Psychology. Students and their advisers should take careful note of the specified prerequisites for advanced offerings in this listing. The specified courses (or their equivalents from other institutions) provide a necessary background for entry into these advanced courses.

Students seeking the Bachelor of Arts degree in Psychology must complete the following departmental requirements in addition to those required by the College of Arts and Sciences.

Psychology 10
Biology 11 and 11L
One additional Natural Science Perspective with or without lab
One of Psychology 20, 21, 22, or 23
Two of Psychology 24, 28, 33, or 80
Psychology 30 or 30C
Psychology 50
Two Psychology courses numbered 100 or above (except Psychology 104; may include Psychology 152 or 153 but not both.)
One additional Psychology course

A student may submit a maximum of 40 hours of credit in psychology courses towards the completion of the B.A. degree.

If possible, Psychology 30 or 30C should be taken prior to the junior year.

Students interested in pursuing a professional career in psychology or related sciences may elect to work for the Bachelor of Science degree in Psychology. The following requirements are those specific to the B.S. in Psychology. In addition to these requirements the candidate for the B.S. in Psychology must fulfill all of the perspective and basic skill requirements of the B.A. degree.

Out of Department:

Modern Language through level 4
Math 31 and 32
Computer Science 14
Biology 11 and 11L
At least four additional Natural Science
(one of which must be a physical science and at least one of which must have a lab)
Anthropology 117

Psychology Courses:
(minimum of 10 courses)

Psychology 10
Two of Psychology 20, 21, 22, or 23
Two of Psychology 24, 28, 33, or 80
Psychology 30C. (With departmental approval, Psychology 30 plus an advanced course in psychological measurement or research design may substitute for Psychology 30C.)
Psychology 50
Three additional courses above
Psychology 99
(except Psychology 104) (Psychology 130 strongly recommended)

All majors must complete at least six psychology courses above Psychology 10 with a grade of C (not C -) or higher. Students planning to enter graduate programs in psychology here or elsewhere are urged to include Psychology 130 as well as Psychology 30 in their program and as many courses numbered 100 and above as possible. Details of the student's program may be worked out in consultation with their college and departmental advisers.

Any major in the program with an overall grade point average of 3.2 or higher is eligible for enrollment in the departmental honors program. Application to the Director of the Honors Program should be made before registering for the second semester of the junior year. Each candidate for honors participates in a three-semester sequence which provides an opportunity to carry out independent work in an area of the student's choice under the guidance of a departmental faculty member. The Director of the Honors Program will help the student work out the choice of appropriate topic and research supervisor.

10 General Psychology (3). No prerequisite. A survey of major principles of psychology and an introduction to scientific modes of thought about behavior. Students participate in ongoing psychological research in the Department. Fall and spring. Staff.

Note: Psychology 10 is prerequisite to all Psychology courses listed below.

20 Cognitive Psychology (3). Prerequisite, Psychology 10. Topics in attention; memory; visual, auditory, and other forms of information processing; decision making; and thinking. Fall and spring. Staff.

21 Sensation and Perception (3). Prerequisite, Psychology 10. Topics in vision, audition, and the lower senses. Receptor mechanisms, psychophysical methods, and selected perceptual phenomena will be discussed. Fall and spring. Staff.

22 Learning (3). Prerequisite, Psychology 10. Topics in conditioning, verbal learning, memory, and problem solving. Fall and spring. Staff.

23 Biopsychology (3). Prerequisite, Psychology 10. Study of the biological basis of behavior. Emphasis will be placed on human findings and applications. Fall and spring. Staff.

24 Child Development (3). Prerequisite, Psychology 10. Study of the development of social and intellectual behavior in normal children, and the processes which underlie this development. Emphasis is typically on theory and research. Fall and spring. Staff.

28 Personality (3). Prerequisite, Psychology 10. Basic principles of personality structure, dynamics, development, assessment and theory are discussed. Consideration is given to both environmental and biological determinants of personality. Fall and spring. Staff.

30 Statistical Principles of Psychological Research (3). Prerequisite, Psychology 10. Consideration of the methodological principles underlying psychological research, descriptive and inferential techniques, and the manner by which they may be employed to design psychological experiments and analyze behavioral data. Three lecture and one laboratory hours a week. Fall and spring. Staff.

30C Statistical Principles of Psychological Research (3). Prerequisites, Psychology 10, Math 31. Consideration of the methodological principles underlying psychological research, descriptive and inferential techniques. This section is for students in the B.S. Psychology program. Fall and spring. Cramer.

33 Social Psychology (3). Prerequisite, Psychology 10. Introductory survey of experimental social psychology covering attitudes, interpersonal processes, and small groups. Fall and spring. Staff.

50 Laboratory Research in Psychology (4). Prerequisite, Psychology 30. Experiments in biological, behavioral, cognitive, developmental, personality, and social psychology will be discussed, prepared, performed and reported. One lecture and four laboratory hours per week. Fall and spring. Eckerman.

70 Drugs and Human Behavior (3). Prerequisite, Psychology 10. This course will examine the use of drugs to alter behavior. Social implications of drug use and methods for preventing and treating drug abuse also will be considered. Fall. Dykstra.

80 Behavior Disorders (3). Prerequisite, Psychology 10. Major forms of behavior disorders in children and adults, with an emphasis on description, causation, and treatment. Fall and spring. Staff.

90 Senior Seminar in Psychology (3). Prerequisite, faculty recommendation. Limited to seniors majoring in psychology. A comprehensive survey of current theoretical, methodological, and professional problems in psychology. Four seminar hours a week as announced. Staff.

94A Evolution of Mind (3). Prerequisite, Psychology 10, Anthropology 41, or Sociology 11. Human biological evolution is reviewed. Man's basic nature - naked ape, killer ape, selfish ape, etc. - is explored. Mind and consciousness are considered in the light of the evolution of ideas and attitudes. Fall and spring. Johnson. [This course has been approved as a Capstone course in Psychology.]

94B Psychological Consequences of Warfare *(PWAD 94B)* (3). Prerequisite, Psychology 10. This course looks at war in terms of its profound impact on a variety of individuals, civilians as well as military. The focus will be in the period from World War II through the present. Fall and spring. Fiddleman. [This course has been approved as a Capstone course in Psychology.]

98 Independent Research (1 - 3). Prerequisites, Psychology 10, two additional courses, permission of the instructor and the department chairman. Supervised research resulting in a written report. Restricted to two semesters of credit. Fall and spring. Staff.

99 Honors in Psychology (3). Prerequisites, application to the Director of Honors and enrollment in the honors programs. Reading and research problems. To be taken twice (fall and spring semester), in the senior year, by each honor student and may be counted toward the major in the student's option. 99A, Fall; 99B, Spring. Staff.

Advanced Undergraduates and Graduate Students

NOTE: Psychology 10 or the equivalent is prerequisite to all courses numbered above 100.

100 Thinking and Cognition (3). Prerequisite, Psychology 10. Considers problems in intelligence, concept formation, problem solving, and thinking. Emphasis will be on an examination of the experimental literature with attention to recent developments in information processing models. As announced. Johnson.

101 Conditioning and Learning *(Neurobiology 101C)* (3). Prerequisite, Psychology 22. A comprehensive survey of the methods, findings, and theories of classical and operant conditioning. Skills necessary to evaluate, integrate and summarize significant original literature will be developed. Fall. Eckerman.

102 Biological Foundations of Behavior *(Neurobiology 102)* (4). Prerequisite, Psychology 22 or Biology 11. Ethological, genetic, and physiological variables will be studied in relation to their behavioral effects. Two lecture and three laboratory hours a week. As announced. Staff.

103 Introduction to Mathematical Psychology (3). Prerequisites, Psychology 30, Math 32, or permission of the instructor. The use of mathematical models in psychology, with topics selected from measurement, scaling psychophysics, learning, decision, and choice theory. As announced. Wallsten.

104 Current Topics in Psychology (3). Prerequisites, Psychology 10 and permission of the instructor. Various special areas of psychological study as needed. Course may be taken more than once. Fall and spring. Staff.

NOTE: Psychology 104 will not fulfill a 100-level course requirement for a B.A. or B.S. degree in Psychology.

106 Physiological Psychology *(Neurobiology 106)* (3). Prerequisite, Psychology 10, 23 or permission of instructor. Elements of neurophysiology, neuroanatomy, and neurochemistry as they apply to the understanding of behavior and conscious experience. Fall and spring. M. Gallagher.

109 Applied Behavioral Analysis (3). Prerequisites, Psychology 22 and 80 or permission of instructor. A survey of applications of learning theory in solving clinical, educational, and societal problems. Practicum experience included. Spring. Staff.

110 Motivation (3). Prerequisite, Psychology 10. Major theories and supporting research on motivational processes in the control of behavior. As announced. Staff.

112 Historical Trends in Psychology (3). Prerequisite, Psychology 10. Limited to senior majors or to graduate students in psychology; others by permission of the instructor. Overview of the origins of psychological concepts, movements, and fields of study. As announced. Fillenbaum.

119 Learning Theory and Practice (3). Prerequisite, Psychology 22. A consideration of paradigms and theories of learning and memory and their application in applied contexts such as education and the workplace. As announced. Staff.

120 Sensory Processes (3). Prerequisites, Psychology 20, 21 or 23. Each year the course will deal with a specific sensory topic, such as "color vision" or "the chemical senses." Fall. Hollins.

121 Advanced Perceptual Processes (3). Prerequisite, Psychology 21. The perception of shape, space, and motion; also, the role of past experience, set and motivation in perception. Fall and spring. Hollins.

122 Human Learning (3). Prerequisite, Psychology 22. Interference theory, long and short-term memory, organizational processes in memory, and human discrimination learning and concept formation. Fall and spring. Long.

124 Psychological Applications of Drugs (3). Prerequisites, Psychology 22 and 80. This course will investigate the pharmacological effects and the clinical efficacy of drugs used to treat behavior disorders. Fall. Picker.

125 Psychology of Language (3). Prerequisite, Psychology 10. After an examination of the possible relations between psychology and linguistics, this course will consider problems in the acquisition of language and particular recent work in experimental psycholinguistics. Fall. Fillenbaum.

127 Cognitive Development (3). Prerequisite, Psychology 24. An examination of the development of attention, perception, learning, memory, and thinking in normal children. Fall and spring. Ornstein, Kurtz-Costes.

128 Development of Language (3). Prerequisite, Psychology 24. Study of the development of language in normal children. Spring. Staff.

129 Development of Social Behavior and Personality (3). Prerequisites, Psychology 24, 28, and 30. Developmental processes during early childhood as these relate to social behavior and personality. Fall and spring. Cairns, Gariepy.

130 Design and Interpretation of Psychological Research (3). Prerequisite, Psychology 30. Emphasis on methodological principles underlying the experimental and correlational research. Interaction of theory and practice in the design and interpretation of psychological studies. Spring. Panter, Wallsten.

135 Behavioral Decision Theory (3). Prerequisite, Psychology 10 or permission of instructor. Simple mathematical and psychological models of judgment and choice, and related experiments, are treated, as are applications to real-world problems in medical, environmental, policy, business, and related domains. Spring. Wallsten.

140 Advanced Personality (3). Prerequisite, Psychology 28 or graduate standing. An in-depth analysis of major theoretical issues in personality study. Fall and spring. Gray-Little, Dahlstrom, Lowman.

141 Psychology of Adulthood and Aging (3). Prerequisite, Psychology 24. A developmental approach to the study of adulthood, from young adulthood through death. Topics include adult issues in personality, family dynamics, work, leisure and retirement, biological and intellectual aspects of aging, dying and bereavement. As announced. Barrick or staff.

142 Psychology of Black Americans (3). Prerequisite, Psychology 28. This course will focus upon the personal characteristics of Black Americans as these have been studied by psychologists and other behavioral scientists. Various methodological approaches will be considered. As announced. Gray-Little.

144 Psychological Disorders of Childhood and Adolescence (3). Prerequisites, Psychology 24 and 80 or graduate standing. A survey of theories bearing on atypical development and disordered behavior, and an examination of major child and adolescent behavior problems and clinical syndromes. Fall and spring. Gordon, Kupersmidt, Margolis, Wiss.

145 Behavioral Medicine (3). Prerequisite, Psychology 80 or graduate standing. An in-depth coverage of the theoretical issues and clinical manifestations of psychological responses characteristic of individuals with chronic physical disorders. As announced. Rosenquist or staff.

146 Behavior and the Brain: Introduction to Neuropsychology (3). Prerequisites, Psychology 20 and 23 or permission of instructor. Introduction to brain-behavior relationships through the study of the effects of brain damage. Focus on cognitive and emotional processes in humans as they are affected by disease and trauma to the brain. Fall. Hartman.

148 Tests and Measurement (3). Prerequisites, Psychology 10 and 30. Basic psychometric theory underlying test construction and utilization. Detailed study of issues and instruments used in assessing intellective functioning, educational progress, personality, and personnel selection. Spring. Staff.

152 Atypical Personalities and Groups I (3). Prerequisite, Psychology 80. This course studies persons and groups labeled as different, outsiders, deviant, stigmatized, or occupying disvalued roles. Focus is placed on how these individuals present themselves in person and in writing. Fall. Barrick; staff.

153 Atypical Personalities and Groups II (3). Prerequisite, Psychology 152. This course studies persons and groups labeled as different, outsiders, deviant, stigmatized, or occupying disvalued roles. Focus is placed on how these individuals present themselves in person and in writing. Spring. Staff.

170 Research in Developmental Psychology (3). Prerequisites, Psychology 24 and 30. Introduction to the issues, methods and outcomes of research in developmental psychology. Demonstrational projects designed and completed. One lecture and four laboratory hours per week. As announced. Cairns, Ornstein, Valsiner.

171 The Development of Black Children (3). Prerequisite, Psychology 10 and 24. A survey of the literature on the development of black children. Topics include prenatal development, intelligence, black dialect, socialization, family issues, and school achievement. Psychology 30 recommended. Jones.

172 Family as a Context for Development (3). Prerequisite, Psychology 10, 24, or permission of instructor. Explores how the family influences children's development. Topics include genetics, family structure (e.g., single parents, working mothers, divorce, number of siblings); discipline; parental values and beliefs; ethnic diversity. Fall, spring. Kurtz-Costes.

180 Introduction to the Study of Exceptional Children (3). Prerequisite, Psychology 28 or equivalent. Overview of mental retardation, autism, and learning disabilities; students devote some time each week in work with a handicapped child in addition to the regular class meetings. Spring. Baroff.

183 Contemporary Sex Roles *(Women's Studies 183)* (3). Prerequisite, Psychology 10. Covers theories and research in the areas of constitutional and social learning influences on sex differences; sex-role identification and the assessment of masculinity and femininity; sex differences in such areas as intellectual accomplishment, achievement, dependency and aggression; and sex differences in relation to behavior disorders. As announced. Margolis or staff.

187 Social Psychology: Theory in Practice (3). Prerequisite, Psychology 33. Application of Social Psychological theory and research to practical social problems, e.g., situational impact on performance, discrimination, negotiation, and small group processes. As announced. Staff.

188 Small Groups (3). Prerequisites, Psychology 30 and 33 or permission of the instructor. Intensive survey of research and theory on behavior in small groups combined with appropriate experience in studying various structured groups. As announced. Schopler or Thompson.

189 Interpersonal Processes (3). Prerequisites, Psychology 30 and 33 or permission of the instructor. Intensive coverage of normal interpersonal processes, focusing on the dyad. Fall or spring. Rusbult or staff.

191 Attitude Change (3). Prerequisites, Psychology 30 and 33 or permission of the instructor. A detailed consideration of the theoretical issues in attitude and belief change. Fall. Thompson or staff.

Curriculum in Public Policy Analysis

Michael I. Luger, *Chair. Advisory Committee*: Glenn Cassidy, David Dill, Barbara Harris, David Lowery, Duncan MacRae, Michael Munger, Mary Alice Shaver, Joseph Rees, Michael Stegman, Kenneth Thorpe, Gordon Whitaker, James A. Wilde.

The Curriculum in Public Policy Analysis (PUPA) is an undergraduate program, leading to a Bachelor of Arts degree. It stresses the analysis of alternative public policies using concepts and techniques from several disciplines, in areas of application as diverse as health, the environment, international affairs, urban and rural development, and social welfare. It is concerned as well with policy choices by citizens, who decide among courses of action in terms of their own system of values rather than those of an employer. In that respect, the Curriculum provides education in the liberal arts. The combination of this general liberal arts training, the development of analytic abilities, and the acquisition of substantive knowledge in a particular policy area constitutes a useful basis for further education for the professions or public service, as well as for policy-related graduate work in individual disciplines.

Bachelor of Arts with a Major in Public Policy Analysis

General College: All General College requirements must be met. The following courses are recommended: Economics 10 (prerequisite for Economics 100), Political Science 41, and Sociology 20. Several Basic Skills and Perspectives Courses also satisfy prerequisite or core requirements of the curriculum, including Statistics 11, 23, and Philosophy 37. No more than one such course also may be counted as a PUPA core course. Prerequisites for options chosen below may also be taken in the General College.

Third and Fourth Years: Specific course requirements to be met in accordance with the following distribution:

Core Requirements: One course in each of the following six core areas is required (18 hours) unless substitution of more advanced courses is authorized by the Curriculum chair:

A. Introduction to Public Policy: Public Policy Analysis 71/ Economics 71/Political Science 71/Sociology 71.
B. Ethics and Policy Analysis: Philosophy 37, 41, 42; Public Policy Analysis 67/City and Regional Planning 67.
C. Economic Analysis: Public Policy Analysis 100/ Economics 100; Economics 101.
D. Political and Administrative Feasibility of Policies: Public Policy Analysis 73/City and Regional Planning 73; Public Policy Analysis 74/Political Science 74.
E. Quantitative Analysis: Public Policy Analysis 175/ Political Science 175/Sociology 175.
F. Advanced Individual Projects: Public Policy Analysis 94

Specialization Courses: Each student must take at least fifteen hours in an area of specialization, chosen in consultation with the Curriculum chair. This may be either a substantive area or an aspect of analysis. Recommended areas of concentration are listed below. A listing of courses that satisfy each of the areas is available in the Curriculum office.

Business and Government Policy
Communications, Public Opinion, and Information Policy
Criminal Justice and Corrections, and Public Policy
Economic Development and Public Policy
Economic Policy
Education Policy
Environmental Protection Policy
Health Policy
International Business Policy
International Relations and Public Policy
International Trade and Economic Policy
Labor Organizations: Business and Public Policy
Labor and Social Welfare Policy
Land Use and Natural Resource Policy
Macropolicy
Natural Resources and Energy Policy
Population Policy
Public Management
Race and Gender Issues and Public Policy
Science and Technology Policy
State and Local Public Policy
The Policy-Making Process and Implementation
Transportation/Infrastructure Policy
Urban Development/Housing Policy

In addition to the above list, students may define their own area of specialization, or combine areas, with consent of the Curriculum chair.

Honors: Students who wish to apply for honors in Public Policy Analysis should consult the Curriculum chair early in their junior year. A substantial project in policy analysis is required.

Prospective majors should see the Chair of the Curriculum in 120 Abernethy Hall.

Minor in Public Policy Analysis

The undergraduate minor in Public Policy Analysis consists of five courses.

PUPA 71	Introduction to Public Policy Analysis or 71H
PUPA 73	State and Local Government Public Policy
or	
PUPA 74 (POLI 74)	Political Feasibility
PUPA 100	Microeconomics for Policy Analysis (ECON 100)
or	
ECON 101	Intermediate Theory: Price and Distribution
PUPA 175 (POLI 175)	Quantitative Methods in Policy Analysis [Prerequisite: STAT 11, 23 or ECON 70]

One applied policy course, approved by the Chair of the Curriculum in Public Policy Analysis.

If any courses listed above are required as part of the student's major core, the Curriculum Chair will substitute other PUPA courses, either PHIL 37, PHIL 41, PHIL 42, or PUPA/PLAN 67 (all deal with ethics and policy analysis), a more advanced version of the courses listed above, or a second applied policy course.

PUPA courses include:

67 Ethical Basis of Public Policy Decision-Making *(City and Regional Planning 67)* (3). An investigation of the legal and moral bases for policy-making in the environmental and land-use policy areas. Fall. Brower; staff.

71 Introduction to Public Policy Analysis *(Political Science 71, Economics 71, Sociology 71)* (3). Introduction to the elements of policy analysis by citizens, including definition of problems, criteria, alternatives, models, decision procedures, and political feasibility: illustrated by case studies. Fall and spring. MacRae, Munger.

73 Urban Politics and Public Policy *(City and Regional Planning 73)* (3). A selection of public policy topics on the current urban agenda, with a focus on the political context. Particular stress on policy alternatives, feasibility, implementation, and the division of responsibility and coordination among levels of government and the public and private sectors. Spring. Howes.

74 Political Feasibility in Policy Analysis *(Political Science 74)* (3). Assessment of feasibility of chosen policies, including possibility of enactment and implementation; determining clearance points, predicting behavior of decision-makers, building support, assessing rhetoric. Spring. Whitaker.

90P Internship (Var.) Supervised internship, with reports required. With permission of the Chair. Fall and spring. Luger. 91, 92 Honors in Public Policy Analysis (3). Directed research, on an independent basis, for majors who are preparing an honors thesis and for the oral examination on the thesis. Fall and spring. Luger.

94 Practicum in Policy Analysis (3). For senior Public Policy Analysis (PUPA) majors and other senior level students having a strong background and/or interest in the rationale, justification and techniques of, and difficulties encountered in choosing appropriate public policies for defined public problems. The course involves an in-depth analysis of a public policy problem by each member of the class. Spring. Staff.

98 Independent Study in Public Policy (Var.). Supervised study for students interested in public policy analysis. Fall, spring. Staff.

100 Microeconomics Theory and Applications *(Economics 100)* (3). See Economics 100 for description.

153 Environmental Management and Policy *(Environmental Sciences and Engineering 153)* (3). Intensive introduction to environmental management policy, including environmental and health risks, policy institutions, processes, and instruments, policy analysis, and major elements of American environmental policy. Lectures and case studies. Fall. Andrews.

175 Quantitative Analysis for Public Policy *(Political Science 175)* (3). Prerequisite, Statistics 11; Economics 70 or equivalent. Application of statistical techniques, including regression analysis, in public policy program evaluation; research design and data collection and management. Spring. Staff.

Department of Radio, Television, and Motion Pictures

Robert Gwyn, *Assistant Chair*

The Department offers an B.A. degree through the College of Arts and Sciences with a major in radio, television, and motion pictures. The Department also offers the M.A. degree through the Graduate School. A number of courses in the Department are also open to students in other departments and schools.

RTVM 20 and RTVM 26 are sophomore prerequisites to upper college work for all RTVMP majors and offer two different perspectives on media studies, social science and aesthetics, respectively. Undergraduate RTVMP majors also are required to take one of the following writing, performance, and production courses: RTVMP 73, 76, 77, 78, 81, 82, or 87. In addition, the student may elect four to six other courses, at least two of which must be from nonwriting, nonperformance, and nonproduction areas. Although no specific tracks or options are required for the major, course clusters exist in the areas of media writing, production and performance, law and policy, new technologies, criticism, aesthetic theory, media history, informational and public broadcasting, broadcast station operations and management, and broadcast journalism. The broadcast journalism sequence, RTVM 73 and RTVM 174, is taught in the RTVMP department and also is open to students from the School of Journalism and Mass Communication.

Consistent with University requirements, the student will take four upper level BA Perspective required courses and enough electives to complete 120 hours. A departmental adviser helps each student find a broad, liberal arts education through conferences and the periodic study of each student's class and extracurricular activities related to the Department's functions.

20 Introduction to Mass Communications (3). Required of all RTVMP majors. Fulfills a Social Science Perspective in General College for nonmajors. Social Science approach to study of mass media institutions, processes and effects. Includes communication theory, research approaches, economic, political and technical dimensions.

26 Media Criticism (3). Required of all RTVMP majors. Fulfills an Aesthetic Perspective in General College for nonmajors. An introduction to the critical analysis of film and television. Staff.

73 Introduction to Broadcast Journalism (3). Prerequisites, permission of the department, JOUR 53. Analysis of broadcast journalism; theory and practice in communicating news in oral and visual modes. Lecture and laboratory hours. Lee, Elam, staff.

76 Audio Production and Writing (3). Prerequisites, permission of the department and RTVM 20, 26. Analysis and application of the principles and methods of audio production. Lee.

77 TV Production and Writing (3). Prerequisites, permission of the department and RTVM 20, 26. A beginning course covering the basic techniques for producing a variety of material for television presentation. Six lecture hours per week. Settle, Simpson, staff.

78 Dramatic/Fiction Writing and Preproduction (3). Prerequisites, permission of the department, and RTVM 20, 26. A basic course dealing chiefly with drama. Viera, staff.

81 Documentary/Nonfiction Writing and Preproduction (3). Prerequisites, permission of the department and RTVM 20, 26. Theories and practices of writing documentary and nondramatic materials for radio, television, and motion pictures. Viera, Kindem, staff.

82 Media Speech and Writing *(Speech 82)* (3). Study and practice in fundamentals of voice and speech for radio, television, and motion pictures. Staff.

87 Film/Video Production and Writing (3). Prerequisites, permission of the department and RTVM 20, 26. The material, processes, and procedures of motion picture production, emphasis on the control of those elements that constitute film form. Lecture and laboratory hours. Kindem, Viera.

90 Internships (1 - 3). Permission of the instructor. Practical experience in a media-related organization. Cannot count toward the minimum requirements for the RTVMP major. Can be repeated up to a cumulative 3-credit hour maximum.

98 Independent Study and Directed Reading (3). Permission required. For the RTVMP major who wishes to pursue an independent research project or reading program under the supervision of a selected instructor. Staff.

99 Honors (3). Permission of the department is required. Reading and preparation of an essay for honors or preparation of a creative work for honors in writing under a departmental advisor. A two-semester course with credit awarded at the end of the second semester. Staff.

101 Special Topics Media Production and Writing (3). Prerequisites, RTVM 20, 26. A special topics course on a selected aspect of media production or writing. Staff.

102 Special Topics in Law and Policy (3). A special topics course on a selected aspect of mass media law, regulation, and policy. Staff.

103 Special Topics in Media Management (3). A special topics course on a selected aspect of mass media management. Staff.

104 Special Topics in Film Study (3). A special topics course on a selected aspect of film history, theory, or criticism. Staff.

105 Special Topics in Media Study (3). A special topics course on a selected aspect of mass media. Staff.

113 Introduction to Instructional Materials Production *(Education 113)* (3). The planning and production of two and three dimensional instructional materials, such as: television graphics, slides, overhead transparencies, manipulative tactile materials and animated pictures. Wileman.

120 Cinema of the Third World (3). Designed for the nonmajor this course examines contemporary filmmaking in Africa, Latin America, and the Middle East as an aesthetic response to the conventions of "dominant" Hollywood style. Allen, Kindem. (B.A. Non-Western/Comparative Perspective.)

125 Mass Media Criticism and Theory (3). Examination and application of contemporary critical approaches to mass mediated works, survey of current issues in aesthetic theory as related to mass media. Kindem, Allen.

130 Mass Media and American Popular Culture (3). An examination of the communication processes and an assessment of the cultural significance of popular films and television programs. The theoretical discussion of popular culture will focus on the problematic distinction between high art and low art, elite culture and popular culture. Popular works of art will be considered in the light of their authors, genre, and social, cultural, and historical contexts. Allen, Kindem.

140 Educational Television Production and Instruction (3). Prepares the educational television participant, including the producer-director, the classroom and studio of instructional materials. Current uses of television; content considerations; cooperative program planning; techniques of television teaching; classroom considerations; production techniques; sources of material; special visual consideration; potentials of various instructional forms; evaluation methodology. Gwyn.

141 Concepts of Public Broadcasting (3). Provides students with the understanding of the rationales, modes, and processes of public broadcasting. Students examine the underlying assumptions of public and commercial broadcasting. Gwyn.

144 The Documentary Idea (3). Historical and theoretical examination of expressions of the documentary idea in different eras and various modes including film, television, and radio. Kindem, Allen.

145 History of Film (3). Study of the development of the art and craft of the film through examining individual films and topics stressing the interaction of aesthetic considerations with socio-cultural and institutional settings. Allen, Kindem.

146 International Communication and Comparative Journalism (Journalism and Mass Communication 146) (3). Development of international communication; the flow of news and international propaganda; the role of communication in international relations; communication in the developing nations; comparison of press systems. Cole.

147 Third World Media (3). The cultural and educational uses of radio and television are studied in the developing countries of Africa, Latin America, and India. Emphasis will be placed on the new electronic media and their effectiveness in serving developing countries. Gwyn.

148 International Film/Television (3). Study of the emergence of film/television art within a specific international context, such as Scandinavia or Great Britain, with particular attention to comparisons and contrasts with the United States in general and Hollywood in particular. Summer. Kindem, Allen, Viera.

150 Minorities and the Media (3). The course traces the development of minorities in film, radio and television, and the press, looking at trends and treatment of minorities by the media, and how and if they have changed. Bobo.

154 Mass Communications and Information Technologies (3). A survey of developing telecommunication systems and technologies and their impact on the traditional electronic media and society. Lee.

155 Cable System Operations (3). Examination of technology, organization, programming, and franchising of cable systems, and the structure, history, and regulation of the cable industry. Staff.

156 Broadcast Operations and Management (3). Examines sources of broadcast revenues, programming decisions, concepts in human resources and personnel, ratings, advertising and promotion, organizational structures of stations and parent companies. Elam.

157 Media Law and Regulation (3). A study of laws affecting media; the role of the courts and federal regulatory agencies in media regulation. Viera.

158 Contemporary Issues in Media Law and Regulation (3). A study of current issues and the changing dimensions of media law and regulation. Viera.

159 Broadcast Financial Planning and Decision Making (3). Examines the unique financial structure of an industry producing an artistic product under federal regulatory control. Includes analysis of such problems as station acquisitions, depreciation, strategic planning, budgeting, and accounting. Elam.

160 Community and Media (3). A study of the electronic media as a feedback mechanism for community organization and social change. A variety of broadcast and nonbroadcast uses of the media are studied. Gwyn.

161 Informational Broadcasting (3). Study of the structure, preparation, and production of informational radio and television programs including the investigative documentary and radio and television "talk" programs. Instruction in data collection, analysis and preparation of informational programs. Gwyn, Elam.

162 Mass Media and the Political Process (3). A course covering the relationship between media and political processes and institutions. Topics include media coverage and portrayal of political institutions, elections, actors, and media influence on our political beliefs. Johnston, Elam, Finn, Gwyn.

163 Issues in Mass Media Ethics (3). Prerequisite, RTVM 20. The course examines the continuing and current significant ethical issues in the full range of American mediated communication through print, broadcast, cable, film, popular recordings, from a basis of the main systems of Western ethical thought. Fall. Gwyn.

174 Advanced Broadcast News Reporting (3). Examination and application of in-depth broadcast news reporting techniques, especially investigative reporting, special events coverage, and the documentary. Students film and produce radio and television programs of actual news events. Elam.

176 Advanced Audio Production (3). Prerequisite, RTVM 76. Advanced analysis and application of the principles and methods of audio production. Lee.

177 Television Directing (3). Prerequisite, RTVM 77. The aesthetics of television directing: script analysis, direction of performance, set and lighting design, creative visual and audio communications. Students direct several television projects. Simpson.

179 Advanced Scriptwriting for Television, Film and Stage (3). Prerequisite, RTVM 78 or 81. A major writing project will be completed by each student, either dramatic or nonfiction for radio, television, film or stage. Viera.

182 Media Acting and Performance (3). Study and practice in acting and performance for radio, television and motion pictures. Staff.

187 Film/Video Directing (3). Prerequisite, RTVM 87. The theory and techniques of film/video directing are studied in lecture, demonstration, and individual student projects. Kindem, Viera, Simpson.

Department of Religious Studies

Jack M. Sasson, *Chair*

The Department of Religious Studies is dedicated to the study of the world's religions as historical and cultural phenomena. We examine singly or comparatively various religious traditions, including their history, sacred texts, beliefs, rituals, and institutions. Inherently interdisciplinary in its approach, Religious Studies also explores these traditions and other related phenomena in light of other cognate disciplines such as anthropology, history, philosophy, and sociology.

The Department offers a wide variety of courses ranging from large introductory classes to advanced seminars, as well as independent studies and an honors thesis program for qualified students.

Introductory: These courses provide general vocabulary and concepts useful for the entire field of religious studies or for major areas within that general field and representative examples of issues, problems and data in the study of religion. Courses numbered below 50 are introductory courses.

Intermediate: These courses provide intensification and refinement of knowledge in the study of religion by focusing on more specific data and by employing methods more precisely. Intermediate courses numbered between 50 and 100.

Advanced: These courses provide for the study of specific topics and problems in which a student should integrate primary and secondary data and methods in "research essays." Admittance to this level is governed by prerequisites and by general preparation. Advanced courses numbered above 100.

Major

There are two options in the major. In deciding on courses and an area of concentration, students may work within the subfields of American Religious History, Ancient Mediterranean Religion, History of Religions, Medieval and Early Modern Religions, and Religion and Culture. Minimum requirements for each option are as follows:

Intensive Option: A total of nine courses must be taken, five of which are to be numbered above 50. Two of these five must be numbered above 100. A student is to take courses in three of the subfields, including at least one in History of Religions. A student must choose one of the three subfields as his or her area of concentration. At least five courses are to be taken within this concentration, including both of those numbered above 100.

Extensive Option: A total of nine courses must be taken, five of which are to be numbered above 50. Two of these five must be numbered above 100. A student is to take courses in four of the subfields, including at least one in History of Religions. A student must choose one of the four subfields as his or her area of concentration. At least three courses are to be taken within this concentration, including at least one of those numbered above 100.

Additional information about the major is available from the departmental office, 101 Saunders Hall.

Minor in Religious Studies

The undergraduate minor in Religious Studies consists of five religion courses. Three of the five courses must be above the 50 level and one course must be above the 100 level.

Additional Information

A. Honors Program: Students majoring in Religious Studies (including double majors) with grade point average of 3.3 or above in department courses and 3.2 GPA overall may choose to do an honors thesis. Candidates for graduation with Honors in Religious Studies are to be enrolled in RELI 97 in the fall and RELI

98 in the spring semester of their senior year. Consult the Department's Director of Undergraduate Studies for details.

B. Languages: Those wishing to proceed to graduate study in religion should give special consideration to the inclusion in the undergraduate program of one or more languages in which the sacred literatures of the world have been written as well as the modern languages of scholarship. In addition to the language courses offered by this department, UNC-Chapel Hill offers courses in Greek, Latin, Arabic, and Sanskrit.

C. Other undergraduate courses: Majors should consult with their advisers concerning other undergraduate courses which have a particular relevance to the study of religion.

D. The Department of Religious Studies also offers an M.A. and a Ph.D. in Religious Studies. M.A. and Ph.D. students in other departments may minor in religion.

10 World Religions (3). An introduction to the basic beliefs, rituals, and institutions of the major Western and non-Western religions. Fall or spring. Sanford, Waghorne.

20 Culture of The Ancient Near East *(History 92a)* (3). A consideration of the cultural and religious milieu of the second millennium b.c. as it sheds light on biblical origins. Fall. Sasson.

21 Introduction to Old Testament Literature (3). Fall. Van Seters, Sasson.

22 Introduction to New Testament Literature (3). Spring. Ehrman.

24 Introduction to Judaic Civilization (3). Continuity and change in the major periods of Judaism. Fall. Halperin.

25 Introduction to Islamic Civilization *(History 36)* (3). A broad, comprehensive, and interdisciplinary introduction to the traditional civilization of the Muslim world. Fall. Bodman.

26 Later Islamic Civilization and the Modern Muslim World *(History 37)* (3). A broad interdisciplinary survey of the later Islamic empires since the fifteenth century and their successor societies in the modern Muslim world. Spring. Bodman.

27 Introduction to the History of Christian Traditions (3). Analysis of continuities and innovations in the history of Western Christian traditions. Fall or spring. Kaufman.

29 History of Religion in America *(History 92b)* (3). Survey of the beliefs and practices of the major religious groups in America and the ways they have influenced American history. Fall or spring. Wacker, Maffly-Kipp.

30 Critical Issues in Western Religious Thought (3). A consideration of major questions within and about religious thought. Fall or spring. Kaufman.

31 Introduction to Religion and Culture (3). This course gives beginning students a sense of what it means to study religion as an academic subject. Some of the most significant instances of the emergence, development, and transmission of religious traditions are examined in cross-cultural context. Masuzawa.

32 Philosophy of Religion *(Philosophy 32)* (3). A philosophical inquiry into the problems of religious experience and belief, as expressed in philosophic, religious, and literary documents from traditional and contemporary sources. Fall and spring. Adams, Rosenberg, Nord.

33 The Claims of Science and Religion *(Philosophy 43)* (3). The proposition that God exists treated as a scientific hypothesis. Evidence for and against the hypothesis. The status of other minds and free will in science and religion. Conflicting views about creation, revelation, miracles, and prayers. Spring. Schlesinger.

35 Introduction to Philosophical Approaches to Religion (3). An inquiry into the philosophical assumptions underlying various approaches to religious phenomena, with special reference to ritual, myth, belief, symbolism, and other forms of religious practice. Fall or spring. Churchill, Tyson.

36 Introduction to the Psychology of Religion (3). A philosophical perspective on religious experiences in various cultures and religious systems as defined by such authors as William James, Sigmund Freud and Mircea Eliade. Fall or spring. Peck.

37 Introduction to Religious Ethics (3). A study of the nature, methods, and aims of ethics, as seen in exemplary persons and actions in Western culture, with emphasis on religious and social context and contemporary problems. Fall or spring. Churchill, Tyson.

39 Asian Religions (3). An introduction to major religions of South Asia and East Asia, such as Hinduism, Buddhism, Confucianism, Taoism, and Shintoism. Fall. Sanford, Waghorne.

40 Mysticism (3). Comparative study of mysticism in several religious traditions, Eastern and Western. Spring. Staff.

54 The Religion of Israel (3). A study of basic aspects of Israelite religion, including expression of theological themes (e.g., creation, salvation, monotheism), religious institutions (e.g., priesthood and prophets), and religious practices (e.g., prayer and sacrifice). Spring. Van Seters.

55 Legends of Genesis (3). A study of the Patriarchal narrative preserved in the book of Genesis as it is illuminated by recent discoveries in the cultures of the Ancient Near East. Spring. Sasson.

56 History and Culture of Ancient Israel *(History 92C)* (3). An examination extending from Hebrew origins to the Babylonian exile and including political history as well as social and religious institutions. Spring. Van Seters.

57 Prophecy In Ancient Israel (3). An examination of the origins, psychology, and conventional forms of prophecy as well as the writings of major prophets of the Old Testament. Fall. Van Seters.

58 Jesus in Myth, Tradition, and History 30 - 200 A.D. (3). An analysis of the variety of traditions used in the first two centuries to portray Jesus, focusing on the reasons for this variety and the historical and literary problems it presents. Fall. Ehrman.

59 The Birth of Christianity (3). An analysis of the origin of the Christian Church and the earliest stages of its expansion with particular emphasis on the problems evident in the shift from a Jewish to a Gentile framework. Paul's role and contribution in defining and resolving the issues will be considered in detail and evaluated in the light of subsequent events. Spring. Ehrman.

60 Classical Islamic Civilization (3). Introduction to the religious institutions, political structures, literatures, and intellectual traditions of Islam in Irano-Semitic lands, from the birth of the Prophet Muhammad to the fifteenth century. Fall. Ernst.

61 Varieties of Early Christianity (3). A study of various forms of Christianity in prominent heresies of the second and third centuries (e.g. Gnosticism, Marcionism, Montanism), focusing on their polemical relationship to orthodox Christianity. Fall. Ehrman.

62 Islamic Civilization in the Modern World (3). Religion, politics, and culture in Islamic countries from 1500 to the present, with emphasis on last great empires (Mughul, Ottoman, and Safavid), European imperialism, and problems confronting Muslims today. Spring. Ernst.

63 Medieval Philosophy *(Philosophy 57)* (3). A survey of medieval philosophy from Augustine through Ockham. Topics: God and the

world, faith and reason, knowledge and reality, the problem of universals. Additional main authors: Anselm, Aquinas, Duns Scotus. Spring. Galligan.

64 The Fundamentals of Hinduism: The Sacred Texts (3). The most widely known and used religious texts of India studied in their ancient and modern context with consideration of their past and present importance to the Western world. On demand. Waghorne.

65 The Fundamentals of Hinduism: Rites, Rituals, Feasts and Festivals (3). An introduction to the importance of ritual in Hinduism. Close study of contemporary temple and domestic rites as well as public festivals. Special attention to methods and problems of interpretation. Fall, spring. Waghorne.

66 The Buddhist Tradition: India and Tibet (3). Historical inquiry into the development of Buddhism from its origins through its periods of greatest glory in India, China, and Japan. On demand. Sanford.

67 The Buddhist Tradition: East Asia (3). An examination of the transformations and developments affecting Buddhism after its importation to East Asia. Special attention will be given to Ch'an/Zen, the Pure Land schools, and the estoric traditions. Fall, spring. Sanford.

68 Literature and Religion in America (3). A study of religious ideas and cultural forms in America through an examination of a variety of genres including novels, poetry, essays, and sermons. Maffly-Kipp.

70 Religious Structures in Primitive Societies (3). A discussion of symbols, myths, and ritual in selected nonurban traditions. Spring. Staff.

71 Liberal Tradition in American Religion (3). An examination of the growth of liberal theological expressions, such as rationalism, romanticism, and modernism, from the early eighteenth century to the present. Spring. Staff

72 Evangelical Tradition in America (3). An attempt to define the historical, sociological, and Constitutional dimensions of Protestant evangelicalism in Britain and America. Fall or spring. Staff.

81 Religion and Literature (3). Prerequisite, Religion 31 or permission. Through reading of literary works, this course will address issues concerning the relation between religion and literature. While examining critically the traditional notion of literature as one of the cultural media available for expressing religious ideas, the course will explore other forms of correlation between the two. The texts will be selected from various cultural traditions.

84 Psychology of Religion (3). Prerequisite, Religion 36 or permission of the instructor. Critical studies of texts (e.g., James, Freud, Jung, Kierkegaard) dealing with the dynamics of religious experience. Psychological, philosophical, and literary approaches to personality change, mystical states, myths, dreams, and symbols. Fall or spring. Peck.

94A Symbolism (3). Examination of various leading theories of symbolism and their application to several areas of modern culture. Particular emphasis placed on symbolism in art and religion but other fields will be considered. Fall or spring. Staff.

97, 98 Courses for Honors (3 each semester). Prerequisite, permission of the instructor and the Director of Undergraduate Studies. Required of all students reading for honors in Religious Studies. Fall and spring. Staff.

99 Topics in the Study of Religion (3). Prerequisite, permission of the instructor. Subject matter will vary with instructor and topic, but will always be focused on a particular problem or issue. Fall and spring. Staff.

105 Myth, History, and Religion (3). An analysis of those terms in their methodological and descriptive meaning in the study of religion. Spring. Staff.

106 The Medieval Church *(History 106)* (3). The nature and workings of the Western church between roughly 600 and 1300. Emphasis on the church "from within": organization, missionary strategies, liturgy, monasticism, popular religion. Spring (alternate years). Pfaff.

107 Topics in Philosophical Problems in Religion (3). Prerequisite, senior or graduate standing, or permission of the instructor. Topic varies. Fall or spring. Tyson.

113 Biblical Hebrew (3). Introduction to the grammar and exegesis of Biblical Hebrew. Fall. Sasson, Halperin.

114 Biblical Hebrew (3). Prerequisite, Religion 113 or permission of instructor. Continuation of Religion 113. Spring. Sasson, Halperin.

115 Intermediate Classical Hebrew (3). Reading in biblical, Mishnaic, and medieval poetry and prose. Fall. Sasson, Halperin, Van Seters.

116 Intermediate Classical Hebrew (3). Continuation of Religion 115. Spring. Sasson, Halperin, Van Seters.

117, 118 Elementary Akkadian (3 each semester). Prerequisite, permission of the instructor. An introduction to the Cuneiform script and the elements of Akkadian grammar. Selected readings in Old Babylonian (Codex Hammurabi, Atrahasis Epic) and Neo-Assyrian texts (Epic of Creation, Gilgamesh Epic). On demand. Sasson.

119 Greek New Testament *(Greek 158)* (3). Prerequisite, Greek 22 or equivalent. On demand. Staff.

120 Religion, Fundamentalism, and Nationalism (PWAD 120) (3). An exploration of explosive combinations of religion and politics in the Iranian revolution, the Palestinian movement, Hindu nationalism in India, and Christian fundamentalism in America. Spring. Ernst.

121 Myths and Epics of the Ancient Near East *(Folklore 141)* (3). Prerequisite, permission of the instructor. An examination of Babylonian, Canaanite, Egyptian, Hittite and Sumerian texts from the pre- biblical era, focusing on representative myths, epics, sagas, songs, proverbs, prophecies, and hymns. Spring (alternate years). Sasson.

123 The Messiah and the Apocalypse (3). Ideas concerning the Messiah and the end of the world held by Jews, Christians, and Muslims. Emphasis on the beginning of the Christian era. Fall or spring. Sasson, Halperin.

124 History-Writing in Ancient Israel (3). Prerequisite, Religion 21. A study of historical tradition in the Old Testament as reflected in the books from Joshua to 2 Kings. On demand. Van Seters.

125 Moses, The Man and the Tradition (3). Prerequisite, Religion 21. A study of the formation of the biblical traditions about Moses in Egypt, the exodus, and the giving of the law at Sinai. On demand. Van Seters.

127 Problems in Early Christian Literature and History (3). Prerequisite, one of the following: Religion 22, 58, 59, or permission of the instructor. Fall. Staff.

128 Problems in the New Testament and Rabbinic Judaism (3). Prerequisite, permission of the instructor. Uses of the New Testament as a source for the study of Judaism, and the study of Judaism as an aid to understanding the New Testament. Fall (alternate years). Halperin.

132 Topics in Medieval Philosophy *(Philosophy 152)* (3). An intensive study of some medieval philosophical author (e.g., Aquinas, Scotus or Ockham) or topic (e.g., arguments for the existence of God, universals, knowledge of individuals). Spring. Galligan.

134 The Reformation *(History 114)* (3). Examines a movement of religious reform that shattered Latin Christendom and contributed many of the conditions of early Modern Europe. Emphases: religious, political, social. Spring. Headley.

136 Studies in Christian Theologies and Theologians (3). Prerequisite, permission of the instructor. An investigation of one writer or school in the history of Christian theology as an example of typical methods, positions, and problems within the tradition. Fall or spring. Kaufman.

138 Modern Western Religious Thought (3). Prerequisite, one of the following: Religion 27, 29, 30, 32, 35, Philosophy 32 or 60. Representative themes and approaches in the work of modern Western religious thinkers. Fall or spring. Peck, Kaufman.

140 Studies in American Religion (3). Prerequisite, permission of the instructor. A consideration of varying topics from intellectual, literary, social, and cultural dimensions of American religion. Fall or spring. Maffly-Kipp.

142 Religion and Anthropology *(Anthropology 142, Folklore 142)* (3). Prerequisite, junior/ senior or graduate standing. Religion, studied anthropologically, as a cultural, social, psychological phenomenon in the works of classical and contemporary social thought. Fall or spring. Tyson and Peacock.

144 Christianization of the Slavs *(Slavic 144)* (3).

145 The Figure of the Father in Religion and Literature *(Women's Studies 145).* (3). Prerequisite, permission of the instructor. The relationship between the figure of the father and the authority of the law (religious, societal, or familial) studied through such writers as Flaubert, Kafka, and Freud. Fall or spring. Masuzawa.

150 Religions of Africa (3). Prerequisite, Religion 10 or equivalent. A general study of religious forms in Africa. Fall or spring. Staff.

156 Ethnicity, Race and Religion in America (3). Prerequisite, Religion 29 or permission. A methodological inquiry into ethnicity, race, and religion as constituents of personal and communal identity. Emphasis on the implications of these categories for a religiously pluralistic society. Maffly-Kipp.

159 Public Religion in U.S. History *(History 159)* (3). Prerequisite, introductory History or Religious Studies course. A study of public religion in U.S. history including the relations of religion and government, the idea of American exceptionalism and destiny, the role of religious movements. Fall. Mathews.

160 Topics in Comparative Religion (3). Cross cultural investigation of specific problems or issues in the general history of religious (e.g. pilgrimage, religious biography, "new" religions). Sanford, Waghorne.

161 Selected Topics in the Study of Asian Religions (3). Prerequisite, permission of the instructor. A close examination of a selected topic in Asian religions. On demand. Sanford.

162 Taoism (3). A study of the major writings and cultic forms of Taoism. Some attention will also be given to related unorthodox, popular movements. Fall or spring. Sanford.

163 Religious Dimensions of Japanese Culture (3). The role of Shinto and Buddhism in the development of Japanese arts and literature. Fall. Sanford.

164 Judaism and the Rabbis (3). Prerequisite, permission of the instructor. Exploration of Rabbinic Judaism (second through sixth centuries a.d.) and its literature. Spring. Halperin.

169 Medieval Religious Texts (3). Prerequisites, permission of the instructor and reading knowledge of Latin. Readings in one or two major texts in Latin which permit close study of several issues in the development of Christian life and thought during the Middle Ages. Spring. Kaufman.

172 Islam in South Asia (3). A survey of the formation of Islamic traditions in the subcontinent from the eighth century to the present, with emphasis on religion and politics, the role of Sufism, types of popular religion, and questions of Islamic identity. Spring. Ernst.

174 Chinese World Views *(Anthropology 174)* (3). An approach to Chinese history, literature, science, and society through an exploration of a few pervasive cultural themes. Chinese sources in translation and western anthropological and philosophical sources are used. Fall or spring. Farquhar.

175 Religion and Culture in Modern South Asia (3). Study of Buddhism, Islam, and Hinduism in the development of contemporary Sri Lanka, Pakistan, and India respectively. Focus on the roots of change in the late 19th century and the problems of modernization. Staff.

176 Chinese Religious and Philosophical Texts: I (3). Prerequisite, permission of the instructor. An introduction to the reading of classical Chinese religio- philosophical texts in the original language. On demand. Sanford.

177 Chinese Religious and Philosophical Texts: II (3). Prerequisite, Religion 176 and permission of the instructor. An in-depth reading in a single text or tradition of texts. On demand. Sanford.

178 Gender in the History of Religions (3). Developments in the use of gender as a religious symbol and a religious structure from primal religion to the beginning of a philosophical tradition in Asia, Africa, and Europe. Fall or spring. Waghorne.

184 Studies in the Psychology of Religion (3). Prerequisite, Religion 36, 84, or permission of the instructor. The interpretation of myth, dreams, and rituals, using the resources of depth psychology and the tools of cultural criticism. Fall or spring. Peck.

185 Shamanism, Feminism and Colonialism (3). Shamanism, Feminism, and Colonialism as significant forces in Latin American religious history and cultural life. Spring. Peck.

186 Freud and Nietzsche on Religion and Interpretation (3). Prerequisite, permission of the instructor. A close examination of selected works by Nietzsche and Freud and their critical impact on the contemporary analysis of literature and of religion. Fall or spring (alternate years). Masuzawa.

187 Studies in the Rhetoric of Religion (3). Prerequisite, permission of the instructor. An examination of ritual, allegory, and symbol as modes of religious expression in cultic and literary contexts. Fall or spring. Tyson.

190 Religion and Society *(Sociology 121)* (3). Prerequisite, Sociology 10 or permission of the instructor. Sociological analysis of group beliefs and practices - both traditionally religious and secular - through which fundamental life experiences are given coherence and meaning. Fall or spring. Reed.

191 Religious Ethics and Issues in Contemporary Medicine (3). Prerequisite, senior or graduate standing. Examination of religious-ethical dimensions of such issues as the dying patient, organ transplants, abortion, prolongation of life, and experimentation on human beings, drawing on theory from the traditional western religions and the social sciences. Fall or spring. Churchill.

193 Special Topics in Mysticism (3). Prerequisite, permission of the instructor. Historical and typological study of specific aspects of mystical and nonnormative religious forms. Fall or spring. Staff.

195 Islam: An Historical Introduction *(History 195)* (3). A study of Islam in the historical context of its growth from the prophecy of Muhammad to a major force in a world civilization. Fall. (Alternate years.) Bodman.

199 Independent Study (3). Prerequisites, advanced undergraduate or graduate standing and permission of the instructor. Subject matter should be arranged with specific instructor. Fall and spring. Staff.

Department of Romance Languages

Stirling Haig, *Chair*

Catalan

101 Introduction to Catalan (3). Introduction to Catalan language. Readings. On demand. Staff.

French

Students interested in a major in French should consult the Director of Undergraduate Studies for French and Italian in 238 Dey Hall.

Those students who plan to teach in public high schools should see "School of Education."

The upper-college requirement for a major in French is eight courses. French 50, 60, 61, and 62 are required. Of the remaining four, two should be chosen from 51, 52, 53, 76, 126, 145, and 146; and two others are to be chosen from that group or from 80, 81, 82, 95, and 96. Those who read for honors will take 97 as a ninth major course. (French 51 does not count toward the major for students who have spent an academic year in France.)

Minor in French, Italian, Portuguese, or Spanish

The Department of Romance Languages offers a minor area of study in four languages - French, Italian, Portuguese, or Spanish.

The minor in any of these languages consists of a minimum of five courses in one language selected from among those numbered between 50 and 199, excluding 83, 84, 94B, and 97 (and excluding Spanish 51). One of the five courses must be the advanced grammar and composition course offered in each of the four languages, i.e., French 50, Italian 50, Portuguese 51, and Spanish 50.

UNC Year-at-Montpellier

The University sponsors an academic year (mid-September through mid-June) of study in Montpellier, France, in cooperation with the Université de Montpellier. Students from UNC-Chapel Hill and from other institutions may earn up to thirty semester hours of undergraduate credit under the supervision of the resident director, a member of the faculty of the Department of Romance Languages. The program is open to qualified undergraduates regardless of academic major and is not restricted to third-year students. Inquiries should be addressed to UNC Year-at-Montpellier, 238 Dey Hall.

1, 2 Elementary French (4 each). The sequence 1, 2 introduces the essential elements of French structure and vocabulary and aspects of French culture. Aural comprehension, reading, speaking, and writing are stressed in that order. Four hours a week plus laboratory. Staff.

3, 4 Intermediate French (3 each). French 3, 4 is a two-semester sequence designed to increase reading and writing skills. An introduction to representative literary works is included. Aural comprehension and speaking skills are also stressed Staff.

14, 15 Beginning French For Advanced Students (3 each). A beginning sequence for students with at least four semesters of another foreign language. Emphasis in the first semester is on grammar; in the second, on reading, writing and speaking. Use of the language laboratory is required. Completion of sequence should enable one to understand lectures in literature classes. Fall and spring. Staff.

21 Introduction to French Literature (3). Prerequisite, French 4 or equivalent. Selections from the major genres of French literature from the Renaissance to the present. Lectures and discussions in French. Any semester. Staff.

23 Intermediate Conversation (3). Prerequisite, French 4 or equivalent. Emphasis on practical, everyday use of the language. Any semester. Staff.

24 Intermediate Composition (3). Prerequisite, French 4 or equivalent. Practice in a variety of areas such as business and social correspondence and creative composition based on literature, depending on interest and needs of the class. Any semester. Staff.

40 French Theatre in Translation (3). See "Courses in English Translation."

41 French Novel in Translation (3). See "Courses in English Translation."

43 French Women Writers in English Translation (3). See "Courses in English Translation."

50 Advanced Grammar and Composition (3). Prerequisite, French 21 or equivalent. Emphasis on syntax, grammar, translation, essay writing. Any semester. Staff.

51 French Conversation (3). Prerequisite, fifth semester French or equivalent. Any semester. Staff. (Does not count toward major for students who have spent an academic year in France.)

52 French Civilization I (3). Prerequisite, French 21 or equivalent. A study of the important aspects of French civilization from its beginning to the French Revolution. Fall. Vogler.

53 French Civilization II (3). Continuation of French 52, from the Revolution to the present. Spring. Vogler.

60 Survey of French Literature I (3). Prerequisite or corequisite, French 50. A survey of French literature from its origins through the sixteenth century. Fall or spring. Staff.

61 Survey of French Literature II (3). Prerequisite or corequisite, French 50. A survey of French literature of the seventeenth and eighteenth centuries. Fall or spring. Staff.

62 Survey of French Literature III (3). Prerequisite or corequisite, French 50. A survey of French literature of the nineteenth and twentieth centuries. Fall or spring. Staff.

76 Advanced French Conversation (3). Prerequisite, French 51 or equivalent. Contemporary topics in French and Francophone culture; conversation and composition. Readings from recent books, journals and newspapers. Staff.

77 Francophone Literature (3). Novel, theater, and film from Africa and the Caribbean. B.A. level Aesthetic Perspective.)

80 Studies in French Drama (3). Prerequisite, French 21 or equivalent. Study of major representative French plays from the Middle Ages through the twentieth century. Fall or spring. Staff.

81 Studies in French Poetry (3). Prerequisite, French 21 or equivalent. A study of selected masterpieces of French poetry. Fall. Staff.

82 Studies in French Prose (3). Prerequisite, French 21 or equivalent. Important developments in the genre from 1600 to 1900. Spring. Staff.

83 Materials and Methods in K - 12 French *(Education 83F)* (6). Prerequisite, senior status. Heining-Boynton.

84 Directed Teaching of K - 12 French *(Education 84F)* (12). Prerequisite, French 83. Heining-Boynton.

94B Grounding of Ethics (3). An investigation of the relationship between philosophy and literature, focusing on the distinctions

between common morality and ethics, and on what foundation values might be established in a world of changing beliefs. Spring. de la Quérière. Capstone course. Does not count toward major.

95 Special Topics or Readings in French (3). A tutorial for advanced students in French on a topic agreed upon by the student and a member of the faculty. Any semester. Staff.

96 Undergraduate Seminar in French Literature (3). Prerequisite, French 21 or equivalent. Inquire in 238 Dey for subject. Any semester. Staff.

97 Honors Thesis in French (3). Required of all students reading for honors. Preparation of an essay under the direction of a member of the faculty. Topic to be approved by thesis director in consultation with honors adviser. Any semester. Staff.

103 Advanced Composition (3). Prerequisite, French 50. Review of advanced grammar. Exercises in translation from English into French of literary and critical materials. Free composition and training in the use of stylistic devices. Fall. de la Quérière, Sherman, Haig.

126 History of the French Language *(Linguistics 164)* (3). Prerequisite, French 50 or instructor's permission. Spring. Maley.

145 French Phonetics and Phonology *(Linguistics 165)* (3). Prerequisite, French 50 or equivalent, or permission of instructor. The study of sounds as systems in modern standard French. Lecture, discussion, laboratory practice in practical phonetics according to individual needs. Spring. Maley.

146 Structure of Modern French *(Linguistics 166)* (3). Prerequisite, French 50 or equivalent, or permission of instructor. Introduction to morphology, syntax, and semantics of modern standard French and to theories of modern grammar. Attention is also given to the application of linguistic theory to the teaching of French. Fall. Maley.

150 The Spanish Comedia of the Golden Age (3). A comprehensive study of the Golden Age Spanish theater from its Renaissance beginnings through the 17th century. Spring. Bandera, Cilveti.

Italian

Students interested in a major in Italian should consult the Director of Undergraduate Studies for French and Italian. (Inquire in 238 Dey Hall.)

The upper-college requirement for the B.A. degree with a major in Italian is eight courses to be chosen from Italian 50, 51, 52, 60, 61, 82, 95, 96, 111, 112, 126, 141, 151, 171, 181, 194, 195, 196.

1, 2 Elementary Italian (3 each). The sequence of 1, 2 introduces the essential elements of the Italian language and aspects of Italian culture. Aural comprehension, speaking, reading, and writing are stressed in that order. Staff.

3, 4 Intermediate Italian (3 each). Designed to develop basic skills with emphasis on speaking and writing, this sequence will also complete a systematic review of grammar. Italian 4 will introduce readings in literature. Staff.

14, 15 Accelerated Italian (3 each.) A two-semester sequence for students with special aptitude and interest in developing language skills. Recommended for those planning work in Italian literature. Does not fulfill General Education requirement. Staff.

21 Advanced Italian (3). Based on the reading of selected works of modern prose and drama, this course is designed to continue the study of grammar and syntax and to motivate the student for more advanced work in literature. Fall. Staff.

23 Intermediate Conversation (3). Prerequisite, Italian 4 or instructor's permission. Emphasis on practical, everyday use of the language. Any semester. Staff.

40 Dante in English Translation (3). Not open to undergraduate majors in Italian. Fall. Cervigni.

41 Italian Renaissance Literature in Translation (3). See "Courses in English Translation."

42 Modern Italian Literature in Translation (3). See "Courses in English Translation."

50 Advanced Composition, Syntax, and Theme Writing (3). Prerequisite, Italian 4, 15, or equivalent. Fall. Staff.

51 Advanced Conversation (3). Prerequisite, Italian 4, 15, or equivalent, or consent of instructor. Spring. Staff.

52 Italian Civilization (3). Prerequisite, Italian 4, 15, or consent of instructor. A study of the importance of Italian civilization from its beginning to the present. Fall. Staff.

60 Survey of Italian Literature I (3). Prerequisites, Italian 15, 21, or consent of Instructor. A survey of Italian literature from its origins through the sixteenth century. Spring. Staff.

61 Survey of Italian Literature II (3). Prerequisites, Italian 15, 21, or consent of instructor. A survey of Italian literature from the seventeenth century to the present. Fall. Staff.

82 The Modern Italian Novel (3). Prerequisites, Italian 15, 21, or consent of instructor. A representative sampling of the genre from Verga to the present. Spring. Staff.

95 Special Topics of Readings in Italian Literature (3). A tutorial for advanced students in Italian on a topic agreed upon by the student and a member of the faculty. Any semester. Staff.

96 Undergraduate Seminar in Italian Literature (3). A seminar on a previously announced subject. Any semester. Staff.

97 Honors Thesis (3). Required of all students reading for honors. Preparation of an essay under the direction of a member of the faculty. Topics to be approved by thesis director in consultation with honors adviser. Any semester. Staff.

111 Survey of Italian Literature I *(to 1600)* (3). Prerequisite, permission of instructor for undergraduate; none for graduate. The survey will be conducted as comprehensively as is feasible on the basis of available anthologies in the original language, with particular attention to authors and texts included in the current departmental reading lists. Fall. (Alternate years.) Rao.

112 Survey of Italian Literature II *(1600 to present)* (3). Prerequisite, permission of instructor for undergraduate; none for graduate. See description under ITAL 111. Spring. (Alternate years.) Illiano.

126 History of the Italian Language (3). Prerequisites, Italian 15, or 21, and consent of instructor. The evolution of the Italian language as documented in literary texts from the origins to the present. Spring. (Alternate years.) Rao.

141 Italian Literature of the Renaissance I (3). Prerequisites, Italian 15 or 21, or equivalent. A study of the major figures of Italian Humanism, Latin and vernacular, from Salutati to Poliziano. Fall. Any semester. Rao.

151 Italian Literature of the Renaissance II: The Cinquecento (3). Prerequisite, Italian 15 or 21 or equivalent. After a brief description of the literary situation in the Cinquecento the following three authors will be studied in detail, with close reading of the three works indicated: Machiavelli, Il Principe and at least one book of I Discorsi; Ariosto, Orlando Furioso; Tasso, Gerusalemme Liberata. Spring. (1987 and every third year.) Rao.

171 The Eighteenth Century (3). Prerequisite, Italian 15 or 21. The literature of Arcadia, the Enlightenment, and Neo-Classicism. Vico, Goldoni, Parini, and Alfieri. Fall. (Alternate years.) Illiano.

181 Italian Romanticism (3). Prerequisite, Italian 15 or 21. Preromanticism; Alfieri; the lyrics and novels of Foscolo, Leopardi, Manzoni; the Romantic drama from Pindemonte to Niccolini. Fall. Illiano. Any semester. Illiano.

182 Italian Literature in the Second Half of the 19th Century (3). Prerequisite, Italian 15, 21 or equivalent. The major literary forms in the second half of the century with particular regard to Verismo, Verga, Carducci, Pascoli, Scapigliatura, and Decadentismo. Spring. Any semester. Illiano.

194 Modern Italian Poetry (3). Prerequisite, Italian 15 or 21. The major poets and trends of the nineteenth and twentieth centuries: Decadenti, Crepuscolari, Futuristi, and Ermetici. Fall. Any semester. Illiano.

195 Modern Italian Fiction (3). Prerequisite, Italian 15 or 21. D'Annunzio, Svevo, Moravia, Pavese, Vittorini, Calvino, etc. Fall. Any semester. Illiano.

196 Modern Italian Drama (3). Prerequisite, Italian 15 or 21. Grotteschi, Pirandello, Italian drama after World War II, Eduardo de Filippo, etc. Spring. Any semester. Illiano.

Portuguese

Students interested in a major in Portuguese should consult the Director of Undergraduate Studies for Spanish and Portuguese in 238 Dey Hall.

The upper-college requirement for the B.A. degree with a major in Portuguese is eight courses to be chosen from Portuguese 51, Composition and Conversation; 53, Luso-Brazilian Civilization; 126, History of the Portuguese Language; 101, 102, Survey of Portuguese Literature; 103, 104, Survey of Brazilian Literature; 135, Brazilian Drama 95, Special Topics or Readings in Portuguese; 96, Seminar in Brazilian or Portuguese Literature.

1, 2 Elementary Portuguese (3 each). Three hours a week, plus laboratory. Fall and spring. Clark; staff. Attention is called to Portuguese 14, 15, designed for advanced students who have fulfilled the requirements in another foreign language.

1-2 Intensive Elementary Portuguese (6). This 1-2 course covers the material of the 1-2 sequence in a single semester. Six hours a week, including one hour of supervised laboratory. Students who place into Portuguese 1 or 2 on the basis of two or more years of high school Portuguese may NOT enroll in the course. Fall. Staff.

3 Intermediate Portuguese (3). Three hours a week, plus laboratory. Fall. Clark; staff.

4 Intermediate Portuguese (3). Three hours a week, plus laboratory. Spring. Clark; staff.

3-4 Intensive Intermediate Portuguese (6). Prerequisite, Portuguese 1-2. The 3-4 course is a continuation of the 1-2 sequence. Six hours a week, including one hour of supervised laboratory. Portuguese 3-4 will be open only to those students who place into Portuguese 3 or have already taken Portuguese 1-2 or Portuguese 2.

14, 15 Beginning Course for Advanced Students (3 each). A course in Brazilian Portuguese for students who have already fulfilled their requirement in another foreign language. Introduction to spoken language, followed by readings from representative modern Brazilian authors. Three hours a week. Fall and spring. Clark; staff.

35 Modern Brazilian Literature in English Translation (3). See "Courses in English Translation."

40 Portuguese and Brazilian Fiction in Translation (3). See "Courses in English Translation."

51 Composition and Conversation (3). Prerequisite, Portuguese 4 or 15, or equivalent. Designed to provide basic conversation and fundamentals of composition in Portuguese. Spring. Clark, Rector; staff.

53 Luso-Brazilian Civilization (3). Prerequisite, Portuguese 4 or 15, or equivalent. A general introduction to the history and culture of Luso-Brazilian civilization, with basic readings in Portuguese, lectures, slides, etc. Fall. Clark, Rector.

95 Special Topics or Readings in Portuguese (3). A tutorial for advanced students in Portuguese on a topic agreed upon by the student and a member of the faculty. Any semester. Staff.

96 Undergraduate Seminar in Portuguese Literature. (3). A seminar on a previously announced subject. Any semester. Staff.

97 Honors Thesis (3). Required of all students reading for honors. Preparation of an essay under the direction of a member of the faculty. Topic to be approved by thesis director in consultation with honors adviser. Any semester. Staff.

101 Survey of Portuguese Literature I (3). Prerequisite, Portuguese 4, 15, or equivalent. An introduction to Portuguese literature from its origins through the eighteenth century. Fall. Rector.

102 Survey of Portuguese Literature II (3). Prerequisite, Portuguese 4, 15, or equivalent. A survey of Portuguese literature of the nineteenth and twentieth centuries. Spring. Rector.

103 Survey of Brazilian Literature I (3). Prerequisite, Portuguese 4, 15, or equivalent. A survey of Brazilian literature of the colonial period and nineteenth century. Fall. Clark. (1987 and alternate years.)

104 Survey of Brazilian Literature II (3). Prerequisite, Portuguese 4, 15 or equivalent. Study of major writers of twentieth-century Brazilian literature. Spring. Clark.

126 History of the Portuguese Language (3). Prerequisite, Portuguese 15, or equivalent or consent of instructor. Survey of the history of Portuguese with special stress on the characteristics of Brazilian Portuguese and the factors underlying them. On demand. Rector.

135 Brazilian Drama (3). Prerequisites, Portuguese 15, or equivalent, or consent of instructor. A study of representative Brazilian plays of the twentieth century with a review of the development of the theatre in Brazil. Fall. Clark.

Rumanian

101 Introduction to Rumanian (3). Introduction to Rumanian language. Readings. On demand. Staff.

102 Elementary Rumanian (3). Continuation of Rumanian 101. On demand. Staff.

Spanish

Students interested in a major in Spanish should consult the Director of Undergraduate Studies for Spanish and Portuguese in 238 Dey Hall.

Those students who plan to teach in public schools should see "School of Education."

The upper college requirement for a major in Spanish is eight Spanish courses to include Spanish 71, 72, and 73, at least one of Spanish 52, 53, 54, and at least two of Spanish 50, 61, 126, 145, 146. The remaining courses may be selected from the two lists above or from Spanish 80, 81, 82, 85, 86, 87, 95, 96, 113, 114, 117, 120, 135. At least one of the eight courses must be numbered in the 100s.

Spanish American Studies

Students may choose a program leading to a B.A. in Spanish with emphasis on Spanish American civilization and culture. The requirements for this degree are as follows:

A. General College: 20 full semester courses. Portuguese required as a second modern language.
B. Upper College: a minimum of 20 full semester courses must be selected with the following distribution.
   1. Eight courses in Spanish, four of which must be chosen from Spanish 53, 54, 61, 73, 81, 87, 113, 114.
   2. Five to seven courses in the social sciences to be drawn from the following areas: Anthropology, Economics, Geography, Political Science, and History. Political Science 56 (Introduction to Government and Politics in Latin America) and History 46 - 47 (Latin American History; Colonial and Independence Periods; Latin American States during the National Period) are required.
   3. Five to seven courses in allied electives, including two courses in Portuguese above the level of Portuguese 4 or 15.

UNC Year-at-Seville

The University sponsors an academic year of study (September through June) in Seville, Spain, in cooperation with the Universidad de Sevilla. Students from UNC-Chapel Hill and other institutions may earn up to thirty semester hours of undergraduate credit under the supervision of the resident director, a member of the faculty of the Department of Romance Languages. The program is open to qualified undergraduates regardless of academic major and is not restricted to third-year students. Address inquiries to the UNC Year-at-Seville, 238 Dey Hall.

1, 2 Elementary Spanish (4 each). The 1-2 sequence introduces the essential elements of Spanish structure and vocabulary and aspects of Spanish culture. Aural comprehension, speaking, reading, and writing are stressed in that order. Four hours a week, plus laboratory for two semesters. Staff.

1-2 Intensive Elementary Spanish (6). The 1-2 course covers the material of the 1-2 sequence in a single semester. Six hours a week, including one hour of supervised laboratory. Students who place into Spanish 1 or 2 on the basis of two or more years of high school Spanish may NOT enroll in the course. Fall. Staff.

3-4 Intensive Intermediate Spanish (6). Prerequisite, Spanish 1-2. The 3-4 course is a continuation of the 1-2 sequence. Six hours a week, including one hour of supervised laboratory. Spanish 3-4 will be open only to those students who place into Spanish 3 or have already taken Spanish 1-2 or Spanish 2. Spring. Staff.

3, 4 Intermediate Spanish (3 each). The two-semester sequence of Spanish 3, 4 is designed to increase reading and writing skills. An introduction to representative literary works and study of the finer points of Spanish structure are included. Aural comprehension and speaking skills are also stressed. Staff.

14, 15 Beginning Spanish for Advanced Students (3 each). A beginning sequence for students with at least four semesters of another foreign language. Emphasis in the first semester is on grammar; in the second on reading, writing, and speaking. Use of the language laboratory required. Completion of the sequence should enable one to understand lectures in literature classes. Fall and spring. Staff.

21 Introduction to Spanish and Spanish American Literature (3). Prerequisite, Spanish 4 or equivalent. Any semester. Native speakers need instructor's permission. Staff.

22 Spanish and Spanish American Culture (3). Prerequisite, Spanish 4 or equivalent. Any semester. LoRé, staff.

23 Conversation I (3). Prerequisite, Spanish 4 or equivalent. Fall and spring. Native speakers need instructor's permission. Staff.

24 Business and Technical Spanish (3). Prerequisite, Spanish 4 or equivalent. Readings related to students' prospective fields of interest. Any semester. Staff.

35 Contemporary Spanish American Prose Fiction in Translation (3). See "Courses in English Translation."

40 Masterpieces of Spanish Literature in Translation (3). See "Courses in English Translation."

46 Cervantes in English Translation (3). See "Courses in English Translation."

50 Advanced Grammar and Composition (3). Prerequisite, fifth semester Spanish or equivalent. Fall and spring. Perelmuter, Rivero-Potter, staff.

51 Conversation II (3). Prerequisite, fifth semester Spanish or equivalent. Fall and spring. Native speakers need instructor's permission. Staff.

52 Spanish Civilization (3). Prerequisite, Spanish 21, 22, 23, or equivalent. Spain, Spaniards, and Spanish life with special emphasis on nonliterary aspects. Spring. Staff.

53 Spanish American Civilization (3). An introduction to the culture of Mexico, Central America, and the Andean countries. Prerequisite, Spanish 21, 22, 23 or equivalent. Fall. Salgado, Perelmuter, Rivero-Potter, staff.

54 Spanish American Civilization (3). An introduction to the culture of the River Plate region and the Caribbean countries. Prerequisite, Spanish 21, 22, 23 or equivalent. Fall. (1986 and alternate years.) Salgado, Perelmuter, Rivero-Potter, staff.

61 Advanced Conversation and Composition (3). Prerequisite, Spanish 51 or equivalent. Contemporary topics of Spain and Spanish America based on current periodicals, literature, etc. Attention paid to improving not only speaking skills but also writing ability. Some grammar review. Staff.

71 Survey of Spanish Literature to 1700 (3). Prerequisite, Spanish 21 or equivalent. Fall. Bandera, Cilveti, Domínguez.

72 Survey of Spanish Literature Since 1700 (3). Prerequisite, Spanish 21 or equivalent. Spring. Polo de Bernabé, Casado, Salgado.

73 Survey of Spanish American Literature (3). Prerequisite, Spanish 21 or equivalent. Spring. Salgado, Perelmuter, Rivero-Potter, staff.

80 Masterpieces of Spanish Drama (3). Prerequisite, Spanish 71, 72, 73 or equivalent. Fall. (1987 and alternate years.) Polo de Bernabé.

81 Masterpieces of Spanish and Spanish American Poetry (3). Prerequisite, Spanish 71, 72, 73, or equivalent. Fall. (1988 and alternate years.) Salgado, Polo de Bernabé, staff.

82 Masterpieces of Spanish Prose (3). Prerequisite, Spanish 71, 72, 73, or equivalent. Spring. (1988 and alternate years.) Casado, Collins, staff.

83 Materials and Methods in High School Spanish *(Education 83S)* (6). Prerequisite, senior status. Fall. Heining-Boynton.

84 Directed Teaching in High School Spanish *(Education 84S)* (12). Prerequisite, Spanish 83. Spring. Heining-Boynton.

85 Medieval Spanish Literature (3). Prerequisite, Spanish 71 or equivalent. A survey of lyric poetry, drama, prose, and genres peculiar to the literature before 1500. Fall. (1986 and alternate years.) Bandera, Domínguez.

86 Spanish Literature of the Renaissance (3). Prerequisite, Spanish 71 or equivalent. A survey of poetry, drama, and prose of the sixteenth century. Spring. (1987 and alternate years.) Cilveti, staff.

87 Contemporary Spanish American Prose Fiction (3). Prerequisite, Spanish 71, 72, 73, or equivalent. Spring. (1987 and alternate years.) Salgado, Perelmuter, Rivero-Potter.

90 Seminar in Latin American Studies *(History 90)* (3). Offered in English. Registration for the course must be preceded by a conference with the instructor. Both semesters. Staff.

95 Special Topics or Readings in Spanish or Spanish American Literature (3). A tutorial for advanced students in Spanish on a topic agreed upon by the student and a member of the faculty. Any semester. Staff.

96 Undergraduate Seminar in Spanish or Spanish American Literature (3). Prerequisite, Spanish 21 or equivalent. A seminar on a previously announced subject. On demand. Staff.

97 Honors Thesis (3). Required of all students reading for honors. Preparation of an essay under the direction of a member of the faculty. Topic to be approved by thesis director in consultation with honors adviser. Any semester. Staff.

103 Advanced Composition (3). Prerequisite, Spanish 50. Review of advanced grammar. Compositions on a variety of topics designed to enhance writing proficiency in Spanish. Training in the use of stylistic devices. Staff.

110 The Generation of 1898 (3). Prerequisites, Spanish 71, 72 or 73. A study of the innovative literary forms and techniques of the Generation of 1898 as seen through representative authors such as Azorin, Baroja, Machado, and Valle-Inclan. Spring. Collins, Gil Casado, Polo de Bernabé.

111 The Hispanic Film: Theory/Culture/Literature (3.) Prerequisite, Spanish 50 or equivalent or permission of instructor. A study of Spanish and Spanish-American film with special attention to problems of an aesthetic and ideological nature and to the relationships between literature, culture, and film. Spring. Polo de Bernabé.

113 Colonial and Nineteenth Century Spanish American Literature (3). Prerequisites, Spanish 71, 72 or 73. Fall. Salgado, Perelmuter.

114 Modernist and Contemporary Spanish American Literature (3). Prerequisites, Spanish 71, 72 or 73. Spring. Salgado, Perelmuter, Rivero-Potter.

117 Cervantes (3). Prerequisite, Spanish 71, 72 or 73. The works of Cervantes, stressing the *Quijote* and *Novelas ejemplares*, with consideration of background of Renaissance prose (the romance of chivalry, pastoral, sentimental novel). Spring. Bandera.

120 Women in Hispanic Literature *(Women's Studies 120)* (3). The Image of Woman in 16 - 17th Century Hispanic Literature. A study of the inscription of femininity in texts by Spanish and Spanish American authors. Readings will be available in Spanish or in English translation. Lectures will be conducted in English. Spring. Perelmuter.

126 History of the Spanish Language *(Linguistics 154)* (3). Prerequisite, Spanish 71, 72 or 73. The formation of Castilian and other peninsular dialects and languages, beginning with Vulgar Latin and including Visigothic and Arabic influence. Expansion to the New World. Spring. Domínguez.

135 Modern Spanish Drama (3). Prerequisites, Spanish 71, 72 or 73. A study of plays by principal Spanish dramatists of the twentieth century. Fall. (1986 and alternate years.) Polo de Bernabé.

145 Spanish Phonetics and Phonology *(Linguistics 155)* (3). Prerequisite, Spanish 51 or equivalent. The study of sounds as a system in American and Peninsula Spanish. Attention to practical phonetics according to individual needs. Fall or spring. King, staff.

146 Structure of Modern Spanish *(Linguistics 156)* (3). Prerequisite, Spanish 50 or equivalent. Introduction to theories of grammar with a detailed analysis of the semantic and syntactic structure of contemporary Spanish. Attention also given to the application of linguistic theory to the teaching of Spanish. Fall. King.

150 The Spanish Comedia of the Golden Age (3). A comprehensive study of the Golden Age Spanish theater from its Renaissance beginnings through the 17th century. Spring. Bandera, Cilveti.

Romance Languages

29 Literature in the Romance Languages (3). An introduction to literature in the Romance languages. All readings in English translation. Focus and readings will vary. Fall, spring. Staff.

94A Interdisciplinary Seminar in Renaissance Studies *(History 94D, Comparative Literature 94A)* (3). See History 94D for description.

96 Seminar in Romance Languages (3). Fall or spring. Staff. Capstone course.

170 Romance Sociolinguistics (3). Study of language in its social context; language variation, multilingualism, social dialects, the role of culture, language and sex. Includes individual work on a specific language. Spring. King.

Courses in English Translation

The courses listed below may not be taken for credit toward the foreign language requirement or for credit in the French, Italian, Portuguese, or Spanish major programs.

French

40 French Theatre in Translation (3). Representative dramatic masterpieces from the seventeenth to the twentieth century. Fall. Daniel.

41 French Novel in Translation (3). Analysis of representative French novels from the seventeenth century to the present. Spring. Daniel.

43 French Women Writers in English Translation (3). Works by French women authors read in translation along with pertinent theoretical texts. Course content will vary with each semester incorporating texts from different periods and genres. Fall. Burns, staff.

Italian

40 Dante in English Translation (3). A reading of Dante's Divine Comedy. Cervigni.

41 Italian Renaissance Literature in Translation (3). A study of the major authors of the Italian Renaissance with special attention to Petrarch, Boccaccio, Machiavelli, Castiglione, Ariosto, and Tasso. Fall. Staff.

42 Modern Italian Literature in Translation (3). A study of the major prose writers of modern Italian literature with special attention given to Manzoni, Verga, Pirandello, Svevo, Moravia, Lampedusa, and other contemporary novelists. Spring. Staff.

Portuguese

35 Modern Brazilian Literature in English Translation (3). Prose, poetry, and theater of modern Brazilian writers from Machado de Assis to the present. Fall and spring. Clark.

40 Portuguese and Brazilian Fiction in Translation (3). Narrative works by Camilo Castelo Branco, Eca de Queiroz, Fernando Namora, Machado de Assis, Jorge Amado and later writers. Readings supplement those in Portuguese 35. Fall. Clark, Rector.

Spanish

35 Contemporary Spanish American Prose Fiction in Translation (3). Narrative works of Borges, Cortázar, García, Márquez, and other contemporary Spanish American writers. Fall and spring. Salgado, Pérez, Rivero-Potter, Staff.

40 Masterpieces of Spanish Literature in Translation (3). Representative Spanish authors from the Middle Ages to the present. Fall and spring. Domínguez, Binotti, staff.

46 Cervantes in English Translation (3). Study and discussion of Don Quixote with consideration of the Exemplary Novels and the background of Renaissance prose. Fall and spring. LoRé, staff.

Arabic

Arabic 101, 102, 141, and 142 are accepted as satisfying General College requirements for foreign language.

95 Special Readings (3). Prerequisites, Arabic 141, 142. Special readings in Arabic.

101, 102 Elementary Arabic I/II (3). Introduction to Modern Written Arabic with emphasis on the basic grammatical structure. Fall and spring. Cortés.

141, 142 Readings in Arabic I/II (3). Classical and/or modern readings in Arabic, according to the students' interest and competence. Fall. Cortés.

Curriculum in Russian and East European Studies

Paul Debreczeny, *Director*. Josef Anderle, Undergraduate Adviser. *Advisory Committee:* Professors Paul Debreczeny, Victor Friedman, Barbara Hicks, Donald Raleigh.

The Curriculum in Russian and East European Studies offers the student an opportunity to become familiar with a language and the history, culture and institutions of the Russian and East European area. The program draws on faculty and courses of five different departments and, through an interdisciplinary approach, seeks to provide both a range of perspectives and a unified understanding of the region and its peoples. It also offers a variety of related extracurricular activities - lectures, films, exhibitions.

The Curriculum is administered by the Program in Slavic, Eurasian, and East European Studies which is, along with its counterpart at Duke University, a federally supported National Resource Center established by the U.S. Department of Education under a Title VI grant.

The program is coordinated by a director, assisted by a faculty adviser to students, and is intended to prepare undergraduate students for careers in the foreign service or other branches of the federal government, in journalism, library science, high school teaching, etc., as well as for graduate work in the various disciplines.

Travel to Russia and Eastern Europe is a desirable part of student training. For travel opportunities see the section on Study Abroad, under the Department of Slavic Languages.

Bachelor of Arts with a Major in Russian and East European Area Studies

General College: All General College requirements must be met. Four semester courses in Russian or another East European language, and History 30 and 31 are required. Students entering the program not having met these requirements will be expected to make them up in their junior and senior years.

Third and Fourth Years: The major in Russian and East European Studies consists of an interdisciplinary core of seven courses.

Core Requirements (21 hours):

A. From one to three courses in Slavic languages and literatures. One course must be in literature.

B. From one to three courses in Russian and East European history.

C. Two or three courses from among the following: Art 199; Economics 67, 92, 168; Geography 165, Political Science 55, 122, 124, 139, 143, 163.

D. Slavic 60, an interdisciplinary seminar normally taken at the senior level, and taught each year by a different faculty member.

Honors: Majors whose overall GPA is at least 3.2 and whose GPA in the major field is at least 3.5 are eligible to become candidates for graduation with honors. Candidates will enroll in Slavic 97-98 (Honors Reading) and defend an honors thesis.

Department of Slavic Languages

Victor A. Friedman, *Chair*

The Department of Slavic Languages offers courses leading to the degrees of Bachelor of Arts, Master of Arts, and Doctor of Philosophy. The undergraduate programs leading to the B.A. in Slavic Languages are made up of a series of courses in languages, literature, and linguistics which give the student a knowledge of spoken and written Russian and of Russian literature or Slavic and East European linguistics. Courses in Polish, Serbo-Croatian, Czech, Slovak, Bulgarian, Macedonian, and related Balkan languages also are offered within the Department.

The Department offers two undergraduate major programs leading to the B.A. in Slavic Languages: Both major options provide preparatory training that will be useful in government employment, internationally oriented business, library science, journalism, and teaching, among others, as well as for graduate study in a range of humanistic and social science disciplines.

Major in Russian Language and Literature

In addition to satisfying the General College requirements, an undergraduate major in Russian language and literature

is required to take eight (8) courses in Russian including: Russian 22, Russian Conversation; Russian 31 and 32, Advanced Russian Grammar; and Russian 50, Introduction to Russian Literature. Normally the student is required to take Russian 111, Advanced Russian Conversation and Composition, in the senior year and to take three (3) additional courses offered by the Department, not more than one of which may be literature in translation and at least two (2) of which shall be at the 100 level.

Major in Slavic and East European Linguistics

Students should satisfy General College requirements and should select Linguistics 30 as one of the Social Science Perspective courses. An undergraduate major in Slavic and East European Linguistics is required to take eight (8) courses in the Department including: Russian 22, Russian Conversation; Russian 31 and 32, Advanced Russian Grammar; Russian 101, Structure of Modern Russian; one (1) additional course in Slavic Linguistics and one (1) other course offered by the Department at the 100 level. In addition to Russian, the student is required to take (1) year of a second language of the East European, Balkan, or Soviet regions as offered in the Department.

Russian and Slavic majors qualified for honors work may arrange with the departmental honors adviser to take Russian 97 or Slavic 97 (which can count as one of the eight courses for the major), followed by Russian 98 or Slavic 98 (writing of honors thesis).

Minor in Russian Language

The undergraduate minor in Russian Language consists of the following five courses in Russian language study beyond Russian 4:

Russ 21	Russian Conversation
Russ 22	Russian Conversation
Russ 31	Advanced Russian Grammar
or	
Russ 32	Advanced Russian Grammar
Russ 111	Advanced Russian Conversation and Composition

Minor in Russian and East European Literature in Translation

The undergraduate minor in Russian and East European Literature in Translation consists of five literature courses in the Department. All readings can be done in translation. No more than two of the five courses may be below the 100 level.

Study Abroad

UNC-Chapel Hill has a long-standing cooperative program with the University of Rostov-on-the-Don, which provides for an annual exchange of undergraduates. For UNC-Chapel Hill participants, the purpose of the program is primarily language study, but those who already have a sufficient command of Russian are encouraged to enroll in any course at the University of Rostov. In addition to the semester program (15 hours credit), an intensive summer institute at Rostov for the study of Russian also is available to UNC-Chapel Hill students (6 hours credit).

UNC-Chapel Hill is an affiliated institution in the Council for International Educational Exchange, which has a program for Russian language study at the University of St. Petersburg. The CIEE Program offers summer, single-semester, and academic-year study opportunities.

Study abroad is an enriching educational experience that is highly recommended, although not required for the B.A. degree.

Bulgarian

101 Elementary Bulgarian (3). Pronunciation, structure of language, and reading in modern Bulgarian. Fall. Friedman, Hebert.

102 Elementary Bulgarian (3). Prerequisite, BULG 101. Pronunciation, structure of language, and reading in modern Bulgarian. Spring. Friedman, Hebert.

103 Intermediate Bulgarian (3). Prerequisite, Bulgarian 102. Continuation of the proficiency-based instruction begun in Elementary Bulgarian. Fall. Friedman, Hebert.

104 Intermediate Bulgarian (3). Prerequisite, Bulgarian 103. Continuation of the proficiency-based instruction begun in Elementary Bulgarian. Spring. Friedman, Hebert.

105 Advanced Bulgarian (3). Prerequisite, Bulgarian 104 or permission of instructor. Advanced readings and discussion in Bulgarian in humanities and social science topics. Friedman, Hebert.

106 Advanced Bulgarian (3). Prerequisite, Bulgarian 105 or permission of instructor. Advanced readings and discussion in Bulgarian in humanities and social science topics. Friedman, Hebert.

111 Bulgarian Literature (3). Introduction to Bulgarian literature in English translation. Some readings in Bulgarian for students who can read the language. Friedman, Hebert.

Czech

101, 102 Elementary Czech (3 each). Pronunciation, structure of language, and reading in modern Czech. The audio-lingual approach will encourage generating of simple native sentences and thinking in Czech. Fall and spring. Janda.

103, 104 Intermediate Czech (3 each). Prerequisite, Czech 102 or permission of the instructor. Continuation of proficiency-based instruction begun in Elementary Czech. Fall and spring. Janda.

105 Advanced Czech (3). Prerequisite, Czech 104 or permission of instructor. Advanced readings and discussion in Czech in humanities and social science topics. Fall. Janda.

106 Advanced Czech (3). Prerequisite, Czech 105 or permission of instructor. Advanced readings and discussion in Czech in humanities and social science topics. Spring. Janda.

111 Czech Literature (3). Introduction to Czech literature in English translation. Some readings in Czech for students who can read the language. Staff.

Macedonian

101 Elementary Macedonian (3). Pronunciation, structure of language, and reading in modern Macedonian. Fall. Friedman.

102 Elementary Macedonian (3). Prerequisite, MACD 101. Pronunciation, structure of languiage, and reading in modern Macedonian. Spring., Friedman.

103 Intermediate Macedonian (3). Prerequisite, MACD 103. Continuation of the proficiency-based instruction begun in Elementary Macedonian. Fall. Friedman.

104 Intermediate Macedonian (3). Prerequisite, MACD 103. Continuation of the proficiency-based instruction begun in Elementary Macedonian. Spring. Friedman.

105 Advanced Macedonian (3). Prerequisite, MACD 104 or permission of instructor. Advanced readings and discussion in Macedonian in humanities and social science topics. Fall. Friedman.

106 Advanced Macedonian (3). Prerequisite, MACD 105 or permission of instructor. Aedvanced readings and discussion in Macedonian in humanities and social science topics. Spring. Friedman.

Polish

100 Intensive Elementary Polish (6). Pronunciation, structure of language, and reading in modern Polish. Equivalent to a full-year course for advanced undergraduate and graduate students. Summer. Visiting faculty member or doctoral student.

101, 102 Elementary Polish (3 each). Pronunciation, structure of language, and reading in modern Polish. Fall and spring. Levine.

103, 104 Intermediate Polish (3 each). Prerequisites, Polish 101 - 102 or permission of the instructor. Continuation of the proficiency-based instruction in Elementary Polish. Fall and spring. Holmgren, Levine.

105 Advanced Polish (3). Prerequisite, PLSH 104 or permission of instructor. Advanced readings and discussion in Polish on humanities and social science topics. Fall. Levine, Holmgren.

106 Advanced Polish (3). Prerequisite, PLSH 105 or permission of instructor. Advanced readings and discussion in Polish on humanities and social science topics. Spring. Levine, Holmgren.

111 Polish Literature (3). Introduction to Polish literature in English translation, focusing on 19th- and 20th-century writers. Some readings in Polish for students who can read the language. Levine.

Russian

II. Undergraduate Courses

Language Courses

1, 2 Elementary Russian (4 each). Introductory courses designed to lay foundation of grammar and to convey basic reading and pronunciation skills. Three hours a week, plus recitation section, through two semesters. Staff.

3, 4 Intermediate Russian (3 each). Prerequisite, Russian 1 - 2 or equivalent. Grammar- translation work with increasing proportions of free reading and oral work. Three hours a week through two semesters. Staff.

21, 22 Russian Conversation (3 each). Prerequisite, Russian 4 or equivalent. Designed to develop conversational skills in a variety of situations and subjects. Russian used, except for a minimum of linguistic explanations or comment. Fall and spring. Staff.

31, 32 Advanced Russian Grammar (3 each). Prerequisite, Russian 4 or equivalent. Russian inflection, syntax and word formation presented in a structural framework. Systematic vocabulary building with emphasis on meaningful components of the word. Fall, spring. Feinberg, Hebert, Debreczeny.

33 Advanced Russian Grammar (6). Prerequisite, Russ 4 or equivalent. Intensive third-year course in conjugation, declension, root structure, prefixation and suffixation; modern usage. Equivalent to a full-year course. Exclusively in Russian. Summer. Magomedova and visiting faculty of professorial rank from Russia.

Literature Courses in Russian

44 Selected Readings in Russian (3). Readings in Russian literature or linguistics on topics not usually covered in course work. Fall and spring. Staff.

50 Introduction to Russian Literature (3). Prerequisite, Russian 4 or equivalent. Reading, discussion of selected authors in Russian aimed at improving reading skill and preparing the student for higher level work in Russian literature. Fall. Debreczeny, Hebert.

97, 98 Honors Reading Course (3 each). Researching and writing of a thesis on an agreed-upon topic not covered by scheduled courses, under the direction of departmental advisers. Fall and spring.

Literature in English Translation

70 Russian Literature of the Nineteenth Century (3). Introduction to Russian prose fiction of the 19th century with particular consideration of selected writings of Pushkin, Gogol, Turgenev, Dostoevsky, and Tolstoy. Lectures and readings in English. Fall. Debreczeny, Levine.

72 Russian Literature from Chekhov to the Revolution (3). Literary situations and authors of 1880 - 1917, with emphasis on Chekhov and the Symbolists. Lectures and readings in English; some readings in Russian for majors. Spring. Mihailovich, Magomedova, Holmgren.

73 Russian Culture and Society: 1890-1917 (3). Examines the extraordinary diversity of turn-of-the-century Russian culture (1890s-1917); the proliferation of visual and performance arts; the rise of popular culture; new artistic explorations of gender and sexuality. Fall. Holmgren.

74 Russian Literature After 1917 (3). Russian writers and literary problems from the Revolution to the present. Lectures and readings in English; selected readings in Russian for majors. Spring. Mihailovich, Holmgren.

75 The Image of the Bolshevik Revolution in Soviet Literature *(Peace, War and Defense 75)* (3). Russian poems, fiction, and plays depicting the Bolshevik revolution of 1917 - 1921 offer personal views of the Revolution as seen by the participants. The course should help in understanding the true causes and consequences of the Revolution. Lectures and readings in English. Spring. Mihailovich.

Capstone Course

94A Russians View America (3). Exploration of Russian responses to the United States from the American Revolutionary War through the end of the Cold War. Readings in English on literature, history and political science. Spring. Hebert.

Advanced Courses for Undergraduates and Graduate Students

Courses Open to Non-Russian Majors (Russian not required)

101X, 102X Elementary Russian for Graduate Students (0). Designed for preparation for reading knowledge examination for higher degrees. Passing of 102X will certify that this requirement has been satisfied. Fall and spring. Staff.

164 Dostoevsky (3). Study of major works of Dostoevsky and a survey of contemporary authors and literary trends relevant to his creative career. Readings in Russian for majors, in English for nonmajors. Fall. Debreczeny, Levine.

125 Topics in Russian Literature (3). Material not currently covered in any course. The specific topic will be announced in advanced. Staff.

165 Chekhov (3). Study of major works of Chekhov and survey of contemporary authors and literary trends relevant to his creative career. Readings in Russian for majors, in English for nonmajors. Spring. Debreczeny, Holmgren

168 Masterpieces of Soviet Literature After 1917 (3). A study of outstanding works in Russian literature of the Soviet period, including works by Blok, Zamyatin, Sholokhov, Pasternak, and Solzhenitsyn. Readings in Russian for majors, in English for nonmajors. Fall. Mihailovich, Holmgren.

171 Gogol (3). Study of major works of N.V. Gogol and a survey of contemporary authors and literary trends relevant to his creative career. Lectures and seminar discussions. Readings in Russian for majors, in English for nonmajors. Spring. Debreczeny, Levine, Magomedova.

179 Tolstoy (3). Study of the major works of Tolstoy and a survey of contemporary authors and literary trends relevant to his creative career. Readings in Russian for majors, in English for nonmajors. Fall. Debreczeny, Levine.

186 Contemporary Russian Women's Writing *(WMST 186)* (3). A study of Russian women's writing after World War II, including both fictional and publicistic works analyzed in their socio-political context. Serves as an introduction to Russian women's studies.

190 Teaching Methods and Materials (1). For prospective teachers of Russian. Required of all teaching assistants. Fall. Magomedova.

191 Teaching Methods and Materials (1). For prospective teachers of Russian. Required of all teaching assistants. Spring. Magomedova.

Courses Requiring Reading Knowledge of Russian

101 The Structure of Modern Russian (3). Synchronic analysis of Contemporary Standard Russian phonology, morphology, and morphophonemics. Spring. Feinberg, Friedman, Janda.

111 Advanced Russian Conversation and Composition (3). Prerequisite, Russian 22 or 32, or instructor's permission. Designed to develop conversational and writing skills in a variety of situations and subjects. Russian used, except for a minimum of linguistic explanations or comments. Fall. Magomedova.

112 Advanced Russian Conversation and Composition (3). Prerequisite, Russian 50 and Russian 111. Designed to develop conversational and writing skills in a variety of situations and subjects. Russian used, except for a minimum of linguistic explanations or comments. Spring. Magomedova.

113 Advanced Conversation and Composition (6). Prerequisite, Russ 50 or equivalent. Fourth- year course, designed to develop conversational and writing skills in a variety of situations and subjects. Exclusively in Russian. Equivalent to a full-year course, for advanced undergraduate and graduate students. Summer. Magomedova and visiting faculty of professorial rank from Russia.

151 Pushkin (3). Study of major works. Fall. Debreczeny.

152 Lermontov (3). A study of the major works of Lermontov. Spring. Hebert.

162 Russian Poetry of the Nineteenth Century (3). Readings and lecture on nineteenth century Russian poetry. Fall. 163 The Rise of Russian Prose Fiction (3). Prerequisite, Russian 22 or permission of the instructor. Russian prose of the first half of the nineteenth century; special emphasis on the prose of Pushkin, Lermontov, and Gogol. Spring. Debreczeny.

192 Russian Versification (3). Prerequisite, Russian 31. A study of technical problems and thematic aspects in the development of Russian poetry. Spring. Feinberg.

193 Russian Short Story (3). Prerequisite, Russian 31 or permission of instructor. Short stories from Pushkin to the present are analyzed both historically and artistically. Readings in Russian. Fall. Mihailovich, Debreczeny, Magomedova.

194 Structural Analysis of Russian Poetry (3). An examination of how attention to verbal structure can deepen our understanding of poetic texts. Analysis of individual Russian poems, combined with extensive reading in a formalist/structuralist theory. Fall. Feinberg.

Serbo-Croatian

101, 102 Elementary Serbo-Croatian (3 each). Pronunciation, structure of the language, and readings are emphasized. The audio-lingual approach will encourage simple conversation and writing of simple sentences. Fall and spring. Mihailovich.

103, 104 Readings in Serbo-Croatian Literature (3 each). Prerequisite, Serbo-Croatian 101 - 102 or permission of the instructor. While continuing the study of the language started in Serbo-Croatian 101 - 102, this course will provide an introduction to outstanding works in Serbo-Croatian literature. Fall and spring. Mihailovich.

105 Advanced Serbo-Croatian (3). Prerequisite, SERB 104 or permission of instructor. Advanced readings and discussion in Serbo-Croatian on humanities and social science topics. Fall. Mihailovich.

106 Advanced Serbo-Croatian (3). Prerequisite, SERB 105 or permission of instructor. Advanced readings and discussion in Serbo-Croatian on humanities and social science topics. Spring. Mihailovich.

111 Serbo-Croatian Literature (3). Prerequisite, SERB 104 or permission of instructor. Suirvey of the main works in Serbian and Croatian literatures, from the beginnings to the present. Fall. Mihailovich.

Slavic

29H Literature in Eastern Europe (3). An introduction to the literatures of Eastern Europe, including consideration of political and social influences on literary creation within different cultural traditions. All readings in English translation. Spring. Levine, Debreczeny, Holmgren.

44 Directed Readings in a Slavic Language (3). Prerequisite, permission of the instructor. Directed readings in a Slavic language other than Russian on topics in literature and linguistics not normally covered in scheduled courses. Fall, spring. Friedman, Levine.

48 Childhood and Adolescence in Slavic Literature (3). Childhood and adolescence as portrayed in both fictional and autobiographical form by 19th- and 20th-centuiry Russian, Polish, Czech and other East European writers, including Tolstoy, Dostoevsky, Nabokov, I.B. Singer, Schulz, Milosz. Spring. Levine, Holmgren. (GC level Aesthetic/Literature perspective.)

50 Introduction to Slavic Civilization (3). Introduction to the Slavic world of past and present, viewed as a constituent culture within Western Civilization. Fall. Staff.

60 Topics in Slavic Civilization *(History 60)* (3). A core course for those majoring in Russian and East European Studies, but open to all students. Staff.

94A Ideology and Aesthetics: Marxism and Literature *(German 94A)* (3). See German 94A for description.

97, 98 Honors Reading Course (3 each). Research and writing of an honors thesis. For students majoring in Russian and East European studies. Fall and spring. Staff.

105 Introduction to Slavic Linguistics (3). The phonological history of Slavic languages from the late Indo-European to the split of the Common Slavic linguistic unity. Friedman, Feinberg, Janda.

107 Structure of a Balkan Language *(Linguistics 107)* (3). Study of grammar and readings in selected languages. Choice of language based on student interest: Albanian, Bulgarian, Macedonian, Romany, Turkish; also some adjacent languages: Georgian, Lak, and Tadjik. Fall and spring. Friedman.

112 South Slavic Literature (3). Introduction to literatures of the South Slavic peoples (chiefly Serbian, Croatian, and Bulgarian), with some consideration of their relations to West European literatures. Mihailovich.

115 Slavic Folk Literature (3). Development of heroic songs, folk tales, and ballads in various Slavic areas and their influence on the development of written literature. Spring.

125 Topics in Slavic Literature (3). Comparative studyh of topics in non-Russian Slavic literatures and culture not presently covered in any course. Specific topics will vary and will be announced in advance. Staff.

144 Christianization of the Slavs *(RELI 144)* (3). Survey of the Christianization of Slavs from the ninth century to 1453. Themes include Byzantine missions, the emergency of literary centers, and the role of the Balkans. Readings in English for non-Slavic concentrators. Fall, spring. Hebert. (B.A. level Non-Western/Comparative perspective.)

169 Slavic Immigrant Experience in Literature (3). Fictional and autobiographical expressions of the Slavic and East European immigrant experience in the 20th century. Readings include Russian, Polish, Jewish, and Czech authors from early 1900s to present. Spring. Holmgren, Levine. (B.A. level Aesthetic perspective.)

Department of Sociology

Arne Kalleberg, *Chair*

The undergraduate major program in sociology is designed to provide an understanding of human societies for those desiring a liberal arts education as well as those preparing for graduate study. With the assistance of his or her adviser in the Department, the student may elect a course of study to provide a foundation for a variety of occupations. To assist students in formulating their undergraduate programs in Sociology, the Department offers a supplementary catalog which contains more detailed information on the content instructors intend to cover in a given semester. This may be obtained in the departmental office one week before the start of registration for the fall and spring.

The departmental honors program, summer research opportunities, courses in other departments of related interest, career opportunities, research and teaching interests of faculty, and the Sociology Interest Group (organization for undergraduates) are described in the Handbook for Sociology Majors which may be obtained in the departmental office. Special bulletin boards for undergraduates are maintained outside 159 Hamilton Hall.

Undergraduate Major: Majors are required to take one course chosen from Sociology 10, 11, or 12 as an introductory course. If possible, this requirement should be fulfilled by the end of the sophomore year. Majors must take eight courses in Sociology, not including their introductory course. The eight Sociology courses must include 50 and 51 - 52, which should be taken during the junior year. They may include one course, in addition to the introductory course, selected from among 10,11, 12, and 20. Normally, at least three of the eight courses must be numbered 110 or above. With special permission, one 90s level course may be accepted as a substitute for one of the 110 or above courses. Students must earn grades of C or better in at least 18 hours of major courses, as well as the introductory course.

The Department assigns formal advising responsibilities to certain members of its staff. Their names and office hours are posted on the Department's bulletin board for undergraduates. Students should feel free to discuss academic, career, or related matters with these advisers.

Honors in Sociology: Students with a grade average of B or better are encouraged to apply for admission to candidacy for a degree with honors. This should be done before preregistration in the spring semester of the junior year. The senior honors program emphasizes small-group discussions and independent research under the guidance of faculty members. The aim of the honors program is to free the serious and qualified student from some of the restriction of the usual undergraduate course format, so as to maximize the opportunity for critical analysis and independent study. Graduation with honors requires a 3.2 average and completion of an honors thesis. Detailed information on the honors program can be obtained from the Department Honors Director, Professor John Reed.

Independent Study Reading: Students desiring advanced or specialized work beyond existing course offerings or who wish to explore an area of sociological concern, but not within the traditional setting of the classroom, should consider taking Sociology 92, Independent Study and Reading. Variable credit can be obtained for this course. Permission of a faculty member and the Director of Undergraduate Studies is required. In general, this course should be taken only by students with at least some prior work in sociology or a related social science. Application forms for this course can be obtained at the Department office.

Unless specifically indicated, sociology courses do not have prerequisites. Undergraduates may register for courses 200 and above with the permission of the instructor.

In the list of courses below, "SS" refers to those satisfying the General College requirement for the Social Sciences Perspective; "P," for the Philosophical Perspective; and "NW/C," for the Non- Western/ Comparative Perspective. Also, "BA-SS" and "BA- NW/C" indicate courses satisfying the B.A.-level requirements for the Social Sciences and Non-Western Comparative Perspectives, respectively, except for Sociology majors.

10 American Society (3). Introduction to institutional sociology with special emphasis on the social organization and culture of the United States. The society as a whole and its different subgroups and institutional spheres are analyzed. Bearman, Calhoun, Reed, Simpson, Stenross; staff. [SS]

11 Human Societies (3). Introduction to comparative sociology. The major types of society that have existed or now exist are analyzed, together with major patterns of social change. Bollen, Nielsen; staff. [NW/C]

12 Social Interaction (3). The individual in society. An examination of how people conduct their interactions with others in different kinds of social relationships. Emphasis on the social psychological causes and consequences of such conduct. Kleinman, Wiggins; staff. [SS]

15 Regional Sociology of the South (3). Description and analysis of social aspects of the American South. Emphasis is on recent development and its effects on institutions and culture. Reed; staff. [SS]

20 Social Problems (3). A sociological analysis of aspects of contemporary social problems such as race relations, crime, mental illness, poverty, aging. Landsberger, Oberschall; staff. [SS]

21 Population Problems (3). Social and economic causes of population structure and change. Illustrations drawn from developing countries and the less developed regions and sections of the United States. Entwisle, Rindfuss, Uhlenberg; staff.

22 Black-White Relations in the United States (3). Examination of domination and subordination in general and in specific institutional areas (e.g., economy, polity). Causes of changes in the levels of inequality and stratification are also studied. Cramer, Hall; staff. [SS]

23 Crime and Delinquency (3). The nature and extent of crimes and delinquency; emphasis upon contemporary theories of their causation; examination of correctional programs. Staff. [SS]

24 Sex and Gender in Society *(Women's Studies 24)* (3). Examination of the social differentiation between men and women. Attention to the extent, causes, and consequences of sexual inequality, and to changes in sex roles and their impact on interpersonal relations. Rosenfield, Udry; staff.

30 Family and Society (3). Comparative analysis of kinship systems and family relations. Courtship, marriage, and parent-child relations viewed within a life-cycle framework. Students may not receive credit for this course and Sociology 125. Archer, Entwisle, Harris, Rindfuss, Udry, Uhlenberg, Wiggins; staff. [SS]

31 Social Relations in the Workplace (3). Meaning and content of work in modern industrial society. Preparation for work; autonomy and control; inequality; consequences for health, safety, and family life. Aldrich, Hall, Kleinman, Simpson, Stenross; staff. [SS]

33 Sociology of Politics (3). Patterns of participation in political institutions; public policy; conflict within and between communities and other interest groups; the nature of citizenship in modern society; politics and social change. Calhoun; staff. [SS]

34 Sociology of Sport (3). Sociological and social psychological analysis of sports organizations. Consideration of organizational structure and performance and relationships between sports organizations and other parts of society. Wiggins; staff.

50 Sociological Theory (3). Prerequisite, Sociology 10, 11, or 12. A study of theoretical perspectives in sociology, their relation to contemporary social issues, and their roots in classical social thought. Required of sociology majors. Calhoun, Hall; staff. [P]

51 Measurement and Data Collection (3). Methods of data collection, with attention to problem selection, sources of information, choice of methods, and research design. Operationalization and measurement; sampling, construction of questionnaires, and interviewing; observation techniques; experimentation. Required of sociology majors. Harris, Wiggins.

52 Data Analysis in Sociological Research (3). Prerequisite, Sociology 51 or permission of instructor. Methods of data analysis: descriptive and inferential statistics and multivariate analysis to permit causal inference. Attention to problems of validity and reliability, and to index construction. Required of sociology majors. Harris, Wiggins, staff.

71 Introduction to Public Policy Analysis *(Political Science 71, Economics 71, Public Policy Analysis 71)* (3). Introduction to the elements of policy analysis by citizens, including definition of problems, criteria, alternatives, models, decision procedures, and political feasibility; illustrated by case studies. MacRae; staff.

92 Independent Study and Reading (Var. 1 - 3). Permission of instructor and Director of Undergraduate Studies. Special reading and research in a selected field under the direction of a member of the Department. Staff.

94D Practicum in Policy Analysis *(Political Science 94D, Public Policy Analysis 94D)* (3). A synthesis of principles of policy analysis through work on individual or team projects. A prior course in statistics and Political Science 71 (Public Policy Analysis 71\Economics 71\Sociology 71) are recommended. MacRae; staff.

95 Special Topics in Sociology (3). Periodic offering of courses on developing topics in the field. Staff.

98, 99 Senior Honors Research and Seminar (3 each). Individual student research (under supervision of an adviser). Periodic seminars to discuss work on honors thesis, as well as special topics in sociology. (Sociology 98 is required of senior honors candidates.) Reed.

Courses for Graduates and Advanced Undergraduates

110 Formal Organizations and Bureaucracy (3). Varieties of organizational forms, their structures and processes; creation, persistence, transformation, and demise of organizational forms; role of organizations in contemporary society. Aldrich, J. Blau, Nielsen.

111 Social Movements and Collective Behavior (3). Study of nonroutine collective actions such as demonstrations, strikes, riots, social movements and revolutions, with an emphasis on recent and contemporary movements. Bearman, Landsberger, Nielsen, Oberschall. [BA-SS]

112 Social Stratification (3). Analysis of social structure and stratification in terms of class, status, prestige, and rank. Attention to social roles of elites, professionals, the middle class, the working class and to comparative topics. Aldrich, Rosenfeld. [BA-SS]

114 The City and Urbanization (3). The city as a social, spatial, and political-economic phenomenon in the modern world. Analysis of urban demographic trends, spatial characteristics and economic functions. Substantive topics include segregation, social turmoil, unemployment, fiscal problems, suburbanization and urban public policy. Archer, Kasarda. [BA-SS]

115 Economy and Society (3). Examination of the structure and operation of institutions where economy and society intersect and interact, such as education, industrial organizations, on-the-job training, labor markets, and professional associations. Emphasis on the contemporary U.S., with selected comparisons with Western Europe and Japan. Bearman, Calhoun.

120 The State and Society (3). Analysis of the reciprocal influences of state and social organizations upon each other; the social bases of political authority and stability, of revolution and counterrevolution. Calhoun.

121 Religion and Society *(Religion 190)* (3). Prerequisite, Sociology 10 or permission of the instructor. Sociological analysis of group beliefs and practices - both traditionally religious and secular - through which fundamental life experiences are given coherence and meaning. Calhoun, Reed.

122 Sociology of Health (3). A sociological analysis of (1) the social processes affecting conditions of health and disease and (2) the cluster of social relationships and organizations that comprise the institution of medicine. Staff.

123 Education and Stratification (3). A study of theory and research on the educational institution, with emphasis upon the multiple and changing effects of formal education in industrial societies. Rosenfeld.

124 Law and Society (3). A sociological analysis of comparative legal systems, the role of law in social change and in shaping social behavior. Topics may include the legal profession; property distribution; and the role of law in achieving racial and sexual justice. Stenross. [BA-SS]

125 Family and Society, Junior/Senior Section (3). A special version of Sociology 30 for juniors, seniors, and beginning graduate students. Students may not receive credit for both this course and Sociology 30. Archer, Elder, Entwisle, Harris, Rindfuss, Udry, Uhlenberg. (BA-SS)

127 The Labor Force (3). Supply and characteristics of labor and of jobs, including industrial and occupation changes, education and mobility of labor, and changing demography of the workforce. J. Blau, Entwisle, Kalleberg, Rosenfeld.

128 Sociology of Art (3). Prerequisite, Sociology 10, 11, or 12; or permission of instructor. Connections between art and larger society are examined, as well as the organizational and occupational worlds of artists. Approaches in the fine arts and social sciences are contrasted. J. Blau. [BA Aesthetic Perspective]

129 Women, Race, and Class (3). *(Women's Studies 129)* Conceptualizations of gender, race, and class and how, separately and in combination, they are interpreted by the wider society. Emphasis on how black and working class women make sense of their experiences at work and within the family. Fall. Kleinman, Rosenfeld. [BA-SS]

131 Aging (3). The process of aging from birth to death, with a concentration on the later years of life, examined from a broad perspective. Topics include individual change over the life-course, the social context of aging, and the aging of American society. Uhlenberg.

134 Race and Social Policy (3). Explores the links between race relations, economic and social subordination of racial groups, and governmental policy for the U.S. and other multiracial societies. Emphasis on reciprocal relations of legal and governmental institutions and other social institutions. Hall; staff.

140 Socialization (3). Examines how persons become members of groups, communities and organizations. Emphasis on general social psychological principles and concepts of socialization. Kleinman. [BA-SS]

141 Social Deviance (3). Examines how people initiate, continue, and end stigmatized behavior; social construction of deviant categories, indentities, and careers; the social psychology of labeling deviants. Kleinman.

142 Opinions, Attitudes, and Values (3). The interrelations of ideology, information, attitudes, and behavior. Use of sample surveys in social psychological research and polling. Cramer, Reed.

143 Conflict and Bargaining *(PWAD 143)* (3). Conflict and conflict-resolution behavior. Applications to labor-management relations, family, sports, community politics, international relations. Cramer.

145 Sociology of Emotions (3). The course examines how emotions are organized within social groupings and institutions. Differences in socialization by gender, ethnicity, social class, and age will be explored. Fall. Kleinman. [BA-SS]

150 Theory and Problems of Developing Societies (3). Theories concerning the development process (motivational vs. institutional economics vs. political and social development; similarity of sequential states and outcomes) will be related to policy problems facing the developing nations. Bollen, Calhoun, Landsberger, Oberschall. [BA-NW/C]

152 Soviet Society (3). Development of social structure in the U.S.S.R. since 1917. Study of contemporary social groups and institutions, and of the implications of the Soviet experience for theories of modernization. Staff. [BA-NW/C]

158 Comparative Minority Relations (3). A comparative analysis of dominant-minority group relations. Includes both cultural and racial minorities. Cramer, Hall, Nielsen.

160 Contemporary Social Theory (3). Prerequisite, Sociology 50. Analysis of current problems in general social theory; action and structure, justice and equity, social change and reproduction. Contrast and evaluation of leading approaches to solutions. Calhoun.

171 Urban Public Policy *(Public Policy Analysis 171)* (3). Defining and clarifying urban concerns and policies; emphasis on programs to revitalize cities. Issues include migration of people and jobs, housing, unemployment, poverty, crime, fiscal strain; linkages among settlement patterns, economic development strategies, energy and environmental objectives. Kasarda. [BA-SS]

175 Methods for Policy Analysis and Evaluation (Political Science 175, Public Policy Analysis 175) (3). Prerequisite, one semester of statistics. Introduction to selected techniques such as multiple regression, decision theory, research design, experiments and quasi-experiments, and program evaluation, as well as policy-related models. Lowery; Staff.

199 Sociological Analysis: Special Topics (3). Examines selected topics from a sociological perspective. Course description for a particular semester is available in the Departmental office. Staff.

Department of Speech Communication

V. William Balthrop, *Chair*

Speech communication is the discipline that studies the human experiences that occur when speech links or separates people in varied settings. Study of speech communication enhances personal development, professional effectiveness, and responsible participation in society. Courses offer the opportunity for gaining humanistic understanding of communication and for becoming more personally effective as a communicating human being.

Students are invited to work closely with faculty in courses, through independent study, cucurricular programs, and research projects. The department offers major programs leading to the B.A. and M.A. degrees. Courses are also open to nonmajors whose personal and professional goals require understanding of human communication.

General Speech Communication Major

Required: Speech Communication 33, 41, 52, and six other Speech Communication courses, three of which must be at the 100 level. Total 27 hours.

Pre-Speech and Hearing Sciences Major:

Required: Spch 33, 41, either 52 or 55, Spch 158 (SPHS 130), Spch 123 (SPHS 123), Spch 150 (SPHS 170), Spch 159 (SPHS 183/EDSP 143), and two electives from among: Spch 143, 144, 145, 146, 151, 152, 155, 166, 171, 186. **It is recommended that students consult an adviser in the Division of Speech and Hearing Sciences.**

11 Forensics (1). The course will provide an opportunity for interested undergraduates to practice extensively in the performance of individual forensic events and in academic debate.

13 Parliamentary Procedure (1). A study of leading rules of order and their application.

21 Oral Traditions (3). Introductory course in the form and functions of oral traditional practices. Topic areas may include: dynamics of orality, slang, childlore, storytelling, the trickster and oral history.

31 Voice and Articulation (3). Designed to establish good habits of communication through the study and application of basic principles of phonetics, physiology, and delivery.

33 Public Speaking (3). Theory and extensive practice in various types of speaking.

35 Argumentation and Debate (3). Analysis of issues, use of evidence, reasoning, brief- making, and refutation. Argumentative speeches and debates on legal cases and on current issues. Designed for prospective law students, public policy students, speech teachers, and college debaters.

41 Introduction to the Performance of Literature (3). Study of a variety of literary texts (lyric, epic, dramatic) through the medium of performance.

46 Performance of African/American Literature (3). Prerequisite, SPCH 41. Survey of major African/American writing with alternating emphasis on poetry and narrative.

50 Introduction to Communication & Human Relationships (3). Introduction to the nature and role of theory in the study of communication. Examines the process of theory construction and alternative theories of communication in a range of human relationships.

51 Analyzing Human Communication (3). Introduction to empirical research in Speech Communication; surveys communication variables that influence dyadic, small group, and public interaction; develops appreciation for and competence in quantitative methods of research. Non-performance.

52 Introduction to Interpersonal Communication (3). A study of interpersonal communication in a variety of situations, including interracial and intimate relationships. Considers language, nonverbal behavior, and listening.

55 Small Group Communication (3). An introduction to the theory and practice of communication in the small group setting. Course topics may include group development, conformity and deviation, gender, problem solving, and power and leadership.

56 Gender and Communication *(WMST 56)* (3). Examines multiple relationships between communication and gender. Emphasizes how communication creates gender and power roles and how communicative patterns reflect, sustain and alter social conceptions of gender.

61 The Rhetoric of Social Movements (3). Explores the discourse of dissident voices in American society, particularly as they speak about grievances pertaining to race, gender, the environment; focuses on rhetorical strategies that initiate and sustain social movements.

62 The Rhetoric of War and Peace *(PWAD 60)* (3). Explores philosophical assumptions and social values expressed by advocates of war and peace through a critical examination of such rhetorical acts as speeches, essays, film, literature, and song.

63 The Southern Experience in Rhetoric (3). Examines recurrent themes in the rhetoric of significant Southerners and important campaigns. Considers both the rhetoric of the establishment and the rhetoric of change.

64 Environmental Advocacy (3). Explores rhetorical means of citizen influence of practices affecting our natural and human environment; also, study of communication processes and dilemmas of redress of environmental grievances in communities and workplace. Spring. Cox. (GC level Social Science perspective.)

65 Legal Argumentation (3). Course will examine the role of evidence and reasoning in judicial decision-making through preparation of and presentation of arguments on selected forensic propositions.

67 Political Communication (3). Study of communication in the political arena, emphasizing the development, maintenance, and deterioration of political support systems through public speeches, campaign activities, and the creation of guiding metaphors and symbols.

71 Introduction to Group Performance (3). Prerequisite, Speech 41 and permission of instructor. Performance theory and rehearsal techniques explored through ensemble performance.

81 The Philosophy and Ethics of Legal Communication (3). The philosophy and ethics of legal communication under the advisory system of jurisprudence, including definitions of justice and professional responsibility in communication within those definitions.

85 Communication in the Justice Systems (3). Designed to aid communication among offenders, officials and officers in facilitating positive communication in jails, half-way houses, homes for juvenile delinquents, and prisons.

91 Practicum in Speech Communication (3). Individualized study closely supervised by a faculty adviser and by the departmental coordinator of internships. Instructor permission required.

95 Topics in Speech Communication (3). Intensive individual research on a problem designed by instructor and student in conference.

97 Honors (3). Individual projects designed by students and supervised by faculty member(s).

98 Honors (3).

111 The Rhetoric of the Sophists Plato and Aristotle *(CLAS 111)* (3). Lecture on the nature, development, and influence of Greek and Roman rhetoric, with class discussion of important rhetorical treatises.

112 Classical, Christian, and Post-Classical Rhetoric *(CLAS 112)* (3). Students will make an independent study of one or more aspects of the theory or the history of rhetoric and a rhetorical analysis of one speech.

123 Introductory Audiology *(SPHS 123)* (3).

131 Introduction to Critical Perspectives (3). This course, assuming all humans are critics, explores theories of criticism and symbolic action through readings, lecture and practical criticism of literature, film, discourse and other symbolic acts.

134 Contemporary Rhetorical Theories (3). Prerequisite, Spch 51 or 61 or 63. Investigates contemporary theories of purposive symbolic behavior; focus is upon rational, psychological, and dramatistic explanations of human behavior.

136 Deliberation and the Decision-Making Process (3). Prerequsite, Spch 35 or permission of instructor. Analyzes arguments in 20th-century decisions in an attempt to understand bases of "justification"; topics include deliberation about values, the logic of prediction, and the criterion of "reasonableness" in selection of a policy alternative.

141 Group Performance (4). Prerequisite, Speech 41, 71, one 100-level performance course and permission of instructor. Theory and practice in adaption, direction, and group performance of texts.

142 Performance of Children's Literature (3). Prerequisite, Speech 41 and permission of instructor. The course explores advanced performance theory while focusing exclusively on contemporary poetry, prose fiction, and drama intended for young audiences. Both solo and group performances for young viewers are included.

143 Poetry in Performance (3). Prerequisite, Speech 41. Critical, aesthetic, and rhetorical approaches to performed poetry.

144 Performance of Dramatic Literature (3). Prerequisite, Speech 41 or English 26. Approaches to the relationship between poetry and dramatic action in performance of selected poetic dramas.

145 Narrative Fiction in Performance (3). Prerequisite, Speech 41. Study of selected short stories and novels in performance with emphasis on narrative point of view.

146 Performance of Women of Color (3). *(WMST 146)*, Prerequisite, Speech 41 or permission. The course explores contemporary poetry, feminist discourse, and performance traditions by Latina, Native American, and African American women. Study of culture and performance will culminate in the enactment of poetry. Fall, spring. Madison.

147 Rhetoric of Performance (3). Prerequisite, Speech 21 or 41 and one 100-level Speech class. Addresses rhetorical conceptions of performance. Topic areas may include performance in ritual and cultural theory; modernist avant-gardism and epic theatre; postmodern performance; performance of oral history. Pollock.

150 Anatomy & Physiology of the Speech & Hearing Mechanism *(SPHS 170)* (3). Anatomy and physiology of the speech producing and aural mechanism.

151 Topics in Communication Theory (3). Prerequisite, Speech 51. Designed for advanced students, course provides in-depth examination of particular theories of human communication. Course focus varies.

152 Interpersonal Communication (3). Course focuses on how communication is used to build and sustain interpersonal relationships. Forms and functions of communication are examined as a means of testing and defining relationships.

153 Social Dialects (3). An examination of the nature and role of language, language usage, and dialect in the United States.

154 Persuasion (3). Examines contemporary theory and practice of influencing others' attitudes, beliefs, and actions. Focuses particularly on analyzing and developing persuasive messages. Fall or spring. Zorn.

155 Psychology of Communication (3). An investigation of psychological aspects of communication, particularly the perceptual and interpretive processes underlying the sending and receiving of messages.

156 Communication Development in Children (3). An investigation of the acquisition and development of communication in the normal child. Study of strategies that enhance communication development.

157 Applied Phonetics *(SPHS 140)* (3). Prerequisite, Speech 158 or equivalent. A study of the acoustic, articulatory, auditory, and physiological aspects of the production of speech.

159 Introduction to Communication Disorders (EDSP 143) (3). An introduction of communication disorders.

161 The American Experience in Rhetoric (3). Prerequisite, Speech 61, 62, or 63. Examines public discourse from the colonial period to the present. Discourses, critical perspectives and historical periods studied will vary. Pence. Balthrop.

162 War and Culture *(PWAD 162)* (3). This course examines American cultural myths about war generally and specifically about the causes of war, enemies, weapons, and warriors, and the way these myths constrain foreign and defense policy, military strategy and procurement. Fall. Dauber.

163 Presidential Rhetoric (3). An examination of presidential leadership and influence through the analysis of significant addresses, debates, campaigns, and crises, with particular emphasis on the administrations of presidents since Franklin D. Roosevelt.

165 Speechwriting (3). Prerequisite, Speech 33 or 35. Introduces the student to the principles of writing speeches with special attention to adaptation to audience and occasion and to oral style.

166 Transcultural Communication (3). Prerequisite, one of the following: Speech 52, 61, 62, 63. Examines interpersonal and public communication among people from different cultures. Includes case studies of individuals, sub-cultures, and nations. Pence.

171 Special Topics in Performance Studies (3). Prerequisite, Speech 41 and one 100-level performance course. Advanced study of selected topics drawn from performance history, theory, and practice.

173 Oral History and Performance *(Women's Studies 173, History 173)* (3). This course combines readings and fieldwork in oral history with study of performance as a means of interpreting and conveying oral history texts. Emphasis on women's history. Fall, spring. Hall, Pollock.

181 Introduction to Quantitative Research (3). Basics of data collection, measurement instrument development, and data analytic approaches to communication research are presented to the student. Emphasis is placed on practical application of research.

185 Communication in Organizations (3). Examines internal and external systems of communication; information flow; public, small group, and interpersonal communication.

186 Family Communication (3). Analysis and exploration of personal experiences, family systems theory, and communication theory to describe, evaluate, and improve family communication patterns. Spring. Rosenfeld.

188 Communication and Leadership (3). Prerequisite, Speech 55. Critical examination of alternative theories of leadership and trends in the study of leadership; focuses on the communicative dimensions of leaderships.

Department of Statistics

Stamatis Cambanis, *Chairman*

Undergraduate Major

The undergraduate program in statistics is intended for those who have a serious interest in statistics and who would like to study the subject in sufficient detail to be able to compete successfully in the many important tasks for which well-trained statisticians with Bachelor of Science degrees are needed in today's world. In order to satisfy requirements for this degree, a student should have an ability to handle mathematics through the level of advanced calculus.

The undergraduate program in statistics leads to the degree of Bachelor of Science in Mathematical Sciences. Prospective majors should see the listing of course requirements under the heading of Curriculum in Mathematical Sciences.

Courses for Students in Other Departments

The Department of Statistics offers a variety of courses of potential value to students majoring in other disciplines. Substantial coverage of statistical theory and applied statistical analysis is provided in Statistics 101 and 102. An introduction to probability theory is provided by Statistics 126. The basic theory of statistical inference is given by Statistics 127.

11 Basic Concepts of Statistics and Data Analysis I (3). Prerequisite Math 10 (or exemption). Elementary introduction to statistical reasoning, including sampling, elementary probability, statistical inference, and data analysis. STAT 11 may not be taken for credit by students who have credit for STAT 23, ECON 70, or PSYC 30.

Students who have completed MATH 22 or MATH 31 with a grade of C or higher may not take STAT 11, unless their major requires STAT 11, but may take STAT 23. Fall and spring. Staff.

23 Elementary Probability and Statistics for Business (3). Prerequisite, Math 22 or 31 or permission of department. An introduction to probability and statistics with a special emphasis on application in business. Handling of data, probability distributions, sampling, estimation, hypothesis testing. Fall and spring. Staff.

Advanced Undergraduate

101 Statistical Methods I (3). Prerequisite, integral calculus. Basic probability; descriptive statistics; introduction to statistical inference, including estimation, hypothesis testing, simple linear regression, nonparametric tests, contingency tables. Use of statistical computer packages. Fall and spring. Chakravarti, Fan, Marron.

102 Statistical Methods II (3). Prerequisite, Statistics 101. Linear regression; experimental designs; multivariate analysis; statistical computer packages. Spring. Chakravarti.

104 Sample Survey Methodology *(Biostatistics 164)* (3). Prerequisite, Statistics 102 or equivalent. Principles and methods associated with survey sampling, including simple random sampling, stratified sampling and cluster sampling. Questionnaire design, problems of nonresponse, sources of nonsampling errors. Design, execution, and analysis of an actual survey. Spring. Kalsbeek.

107 Actuarial Mathematics II *(Mathematics 162)* (3). Prerequisite, Mathematics 161, Statistics 126. The theory introduced in Actuarial Mathematics I is expanded to encompass more complex models of financial transactions and risks. Spring. Staff.

126 Introduction to Probability *(Mathematics 146)* (3). Prerequisite, Mathematics 33. Introduction to mathematical theory of probability covering random variables, moments, binomial, Poisson, normal and related distributions, generating functions, sums and sequences of random variables, and statistical applications. Fall and spring. Kelly, Marron, Smith.

127 Mathematical Statistics (3). Prerequisite, Statistics 126 or equivalent. Functions of random samples and their probability distributions; introductory theory of point and interval estimation and hypothesis testing; elementary decision theory. Fall and spring. Carlstein, Fan, Marron, Simons.

Curriculum in Women's Studies

Barbara Harris, *Chair*

Women's Studies is an interdisciplinary exploration of the experiences and perspectives of women. Students taking women's studies courses are exposed to the intellectual, social, economic, political, and artistic contributions of women throughout history and in a variety of cultures and societies. Sex, sexuality, and gender are examined as biological, psychological, and cultural phenomena. Special emphasis is placed on the nature of sex roles as social constructions varying with respect to time, place, and context.

Women's Studies courses also introduce students to various ideologies that have been used throughout history to explain women and men's "natures," functions, roles, and "places" in society. Students will be exposed to the "new scholarship" on women, feminist theory, and critiques of feminism. Finally, Women's Studies entails redefining the traditional scholarly and academic disciplines in order to include women's domains, concerns, and perspectives as integral aspects of these fields of inquiry.

About eighteen departments offer courses that focus entirely on the study of women and gender. Some of these courses have been cross-listed as Women's Studies courses and are identified below; others are taught as special sections of an established course and have to be identified separately each semester.

Students interested in Women's Studies courses or majors should contact the Chair of Women's Studies and the Women's Studies adviser in the College of Arts and Sciences.

Bachelor of Arts with Major in Women's Studies

The major requires twenty-four (24) credit hours taken in Women's Studies courses or departmental courses cross-listed with the Women Studies Curriculum and distributed as follows:

I. Intellectual and Theoretical Foundations: 9 credits.
   1. WMST 50 or its equivalent
   2. One course in Feminist Theory
   3. One course in Minority/Third World/Non-Western Women

II. Interdisciplinary Perspectives: 12 credits distributed among at least one of the following:
   1. Historical Studies
   2. Natural Sciences and Health Sciences
   3. Humanities
   4. Social Sciences

III. Theory and Practice of Women's Studies: 3 credits. Choice of one course.
   1. Senior Seminar in Women and Public Policy (WMST 169)
   2. Independent Reading and Research (WMST 199)
   3. Practicum/Internship (WMST 190)

Honors

An Honors degree in Women's Studies is available to majors who meet university guidelines for honors and who successfully complete a thesis based upon original and independent research. Contact Dr. Barbara Harris, Chair, Women's Studies Curriculum, for further information.

Minor in Women's Studies

A minor in Women's Studies enables students who major in another area to develop an expertise in the interdisciplinary study of women. A minor consists of 15 credits (5 courses) in Women's Studies. The credits must include WMST 50 and come from at least two of the four divisions of the College.

Women's Studies courses include both courses exclusively in Women's Studies and courses in other departments cross-listed with Women's Studies. An internship in Women's Studies can be counted towards three of these twelve credits. Cross-listed courses in a student's major department will not count toward a minor in Women's Studies.

Women's Studies Courses
(administered directly by the Curriculum in Women's Studies)

50 Introduction to Women's Studies (3). An interdisciplinary exploration of women and men in American society. Topics include: family and work; sexuality and sexual identity; gender roles and images in language, literature, religion, art and science; and the impact of the contemporary feminist movement. Course readings drawn from the humanities and the social sciences. Spring. Harris.

95 Special Topics in Women's Studies (3). Topics are announced in advance and reflect the interest of the particular instructor. Each course will concern itself with a study in depth of some problem or issue in Women's Studies. Staff.

190 Practicum in Women's Studies (2 - 4). A supervised internship designed to provide experience working in organizations concerned with women's issues. Prerequisite, WMST 50 or WMST 169. Written paper required. Open to Women's Studies majors and other qualified students. Permission of Internship Coordinator necessary. Fall and spring. Staff.

199 Independent Reading and Research (3). Intensive reading/ research under faculty supervision resulting in a written paper. Open to Women's Studies majors and other qualified undergraduate and graduate students. Permission of the Director necessary. Fall and spring. Staff.

Courses Cross-Listed with Women's Studies
(For descriptions of courses below, see listings under department headings.)

24 Sex and Gender in Society *(Sociology 24)* (3). Rosenfeld, Udry, staff.

42 Sex and Gender in Antiquity *(CLAS 42)* (3). Spring.

43 French Women Writers in English Translation *(French 43)* (3). Staff.

44. Women in German Cinema *(German 44)* (3).

46 Philosophical Issues in Feminism *(Philosophy 46)* (3). Fall or spring. Staff.

56 Gender and Communication *(Speech 56)* (3). Long.

58 Women in Europe I *(History 58)* (3). Fall. Bennett.

59 Women in Europe II *(History 59)* (3). Fall. Bennett.

61 African Women: Changing Ideals and Realities *(African Studies 61)* (3). Dunbar, Newbury.

62 Women in American History *(History 62)* (3). Fall or spring.

63 American Women in Sport *(Physical Education 63)* (3).

64 Women in the Visual Arts I *(Art 64)* (3). Sheriff.

65 Black Women in America *(African Studies 66)* (3). Staff.

72 Women and Politics *(Political Science 72)* (3). Spring. Conover.

80 Women and Gender in Latin American History *(HIST 80)* (3).

86 American Women Authors *(English 86)* (3). Fall. Wagner-Martin.

87 Southern Women Writers *(English 87)* (3). Staff.

90B Feminist Theory and Literary Criticism. *(English 90B)* (3). Staff.

91 Women and Economics *(Economics 91)* (3). Spring. Willis.

92 Women and Work, 1850 - 1900 *(Comparative Literature 92)* (3). Furst.

94A Courtship and Courtliness from King Arthur to Queen Victoria *(French 94A)* (3). Burns.

96 Modern Women Writers *(Comparative Literature 96)* (3). Leonard.

98A Honors in Women's Studies (3). Prerequisite, permission of instructor. Introduction to the methods of research in Women's Studies, designed to lead to the completion of an Honor's Essay. Fall.

98B Honors in Women's Studies (3). Prerequisite, permission of instructor. Introduction to the methods of research in Women's Studies, designed to lead to the completion of an Honor's essay. Spring.

101 Women, Work, and Leisure *(Leisure Studies and Recreation Administration 101)* (3). Fall. Bialeschki. Spring. Henderson.

103 Reproductive Physiology *(Maternal and Child Health 103)* (3). Fall. Hulka.

118 Women, Health, and Development Policy *(Maternal and Child Health 118, Anthropology 118)* (3). Fall or spring. Bender.

120 Image of Women in 16th- and 17th-Century Hispanic Literature *(Spanish 120)* (3). Spring. Perelmuter.

121 Women in Opera *(Music 112)* (3).

129 Women, Race, and Class *(Sociology 129)* (3). Fall. Kleinman.

140 Sex Roles: Cross-Cultural Perspectives *(Anthropology 140)* (3). Spring. Staff.

141 The Anthropology of Gender, Health, and Illness *(Anthropology 141)* (3). Spring. Staff.

145 The Figure of the Father in Religion and Literature *(Religious Studies 145)* (3). Fall, spring. Masuzawa.

146 Performance of Women of Color *(Speech 146)* (3). Madison.

150 Gender and Literature *(English 50)* (3). Staff.

151 Women in the Visual Arts II *(Art 151)* (3). Sheriff.

160 Women and Religion in U.S. History *(History 160)* (3).

161 Introduction to Women's Health and Health Education *(Health Education 160)* (3). Earp.

164 Feminism and Political Theory *(Political Science 164)* (3). Fall. Leonard.

168 Women in the South *(History 168)* (3). Spring. Hall.

169 Women and Public Policy in Twentieth- Century America *(History 169)* (3).

173 Oral History and Performance *(Speech Communication 173, History 173)* (3). History 173. Fall, spring. Hall, Pollock.

176 Women Over Fifty in Contemporary Society *(Nursing 176)* (3). Fall or spring.

177 Women and Health Care Issues *(Nursing 177)* (3). Fall or spring. Fogel.

178 Gender in the History of Religion *(Religion 178)* (3). Fall or spring. Waghorne.

183 Contemporary Sex Roles *(Psychology 183)* (3). Margolis.

184 Women, Science and Technology *(Nursing 184)* (3). Fall or spring. Sandelowski.

185 Women in Folklore and Literature *(Folklore 185, English 185)* (3).

186 Contemporary Russian Women's Writing *(Russian 186)* (3).

209 Topics in Feminist Theory *(Philosophy 209)* (3). Tirrell.

223 Readings in Medieval Woman's History *(History 223)* (3). Bennett.

225 French Feminist Theory *(French 225)* (3). Burns.

228 Feminist Theory for Historians *(History 228)* (3). Bennett.

251 Gender and Visual Culture *(Art 251)* (3). Sheriff.

220 Readings in European Women's History *(History 220)* (3). Fall. Bennett, Harris.

221 Readings in American Women's History *(History 221)* (3). Fall. Hall.

222 Selected Topics in the Comparative History of Women *(History 222)* (3). Bennett/Hall/Harris.

231 Sociology of Gender *(Sociology 231)* (3). Rosenfeld/Udry.

387 Research Seminar on Women's History *(History 387)* (3). Spring. Hall/Bennett/Harris.

The Kenan-Flagler Business School

Carl P. Zeithaml, D.B.A., *Interim Dean*

Courses in economics and certain business subjects had been offered for many years at UNC-Chapel Hill, when in 1919, a comprehensive business curriculum was established. That year the General Assembly, in conformity with the recommendation of the President of the Board of Trustees, enacted the legislation resulting in the organization of the School of Commerce. In 1950 the name of the School was changed to the School of Business Administration, in 1988 to the UNC Business School at Chapel Hill, and in 1991 to the Kenan-Flagler Business School, encompassing graduate, undergraduate, and executive programs. The School occupies a place in the University organization coordinate with other professional schools and the College of Arts and Sciences.

In 1923 the School was accredited by the American Assembly of Collegiate Schools of Business, an organization promoting high standards in professional education for business. Accreditation is based on the ratio and caliber of the faculty; the thoroughness of the academic program; the content and breadth of the curriculum, both in general education and in business; the financial support of the School; and the physical facilities provided for carrying on the work.

The undergraduate course of study, leading to the degree of Bachelor of Science in Business Administration (BSBA), is designed to give a foundation of general education in the natural sciences, the humanities, and the social sciences as well as to provide a professional background in business administration. The program requires four years, except in the Master of Accounting Curriculum (MAC), which is a five- year program.

Students who wish to concentrate in accounting apply to the MAC Program at the end of their junior year. Admission is competitive. Students who complete the program successfully earn both the BSBA degree and the MAC degree.

For those desiring to work at a more advanced level in business administration, the Kenan-Flagler Business School offers courses leading to the degrees of Master of Business Administration (MBA) and Doctor of Philosophy.

Purpose and Policy

Modern society, based on intricate business, economic, social, and governmental institutions, requires a large number of men and women who are trained to be effective and responsible managers. The Kenan-Flagler Business School regards its program leading to the BSBA as one of the most important ways it can serve this need. The School receives substantial support from the University, state and national business communities, and North Carolina as a whole. This support has enabled it to bring together a faculty that includes outstanding teachers, research scholars, and national leaders in their professional fields.

Primary objectives of the School are to prepare students to serve effectively in management positions, and to provide a foundation that will enable them to assume higher levels of responsibility as they gain experience and demonstrate ability. Many graduates of the School continue study in graduate and professional programs. The majority accept positions in business, industry, government, and a variety of nonprofit organizations.

The successful executive requires more than professional competence in the technical and specialized aspects of administration. He or she also must have a broad understanding of the fundamentals of management and an awareness of the economic, social, and human forces that form the environment for a business.

The program in business administration strives to maintain a balance between the needs of general education and of professional education for organizational responsibility. The curriculum has been honed to emphasize the relationships among the functional areas of the firm and domestic and international economic, social, and political forces. The curriculum is constantly updated to reflect current developments in management practice and global business issues.

In guiding the educational policy of the School, the faculty has been attentive not only to the role of the individual teacher, but also to the development of teaching methods that encourage independent thinking and problem solving. Students enrolled in the School can expect to participate in case studies, computer simulations, field projects involving actual firms, lectures, discussions, and formal and informal presentations by executives.

Bachelor of Science in Business Administration

The program leading to the degree of BSBA has been carefully coordinated with the required two-year program of the General College. Students who have successfully completed the prebusiness course requirements may apply

in the second semester of their sophomore year for admission in the following fall. All students must complete an application to the undergraduate business program. Applications will address GPA, written communication skills, educational and career objectives, academic accomplishments and honors, extracurricular activities, leadership opportunities, athletic endeavors, and work experience, both paid and volunteer. We welcome students with outstanding extracurricular experiences who have a good GPA to apply.

The prebusiness course requirements are: English 11 and 12, Mathematics 22 or 31, Statistics 23, Business Administration 24, Political Science 41, Business Administration 71, and Economics 10, and 100 or 101. In addition, students must pass a short course which demonstrates competency in computer skills. The Undergraduate Program in Business Administration requires that each student take a core of nine courses in fundamental business subjects, supplemented by appropriate elective courses in areas outside business administration.

The core courses required of all candidates for the BSBA are:

Business Administration 150, Business Administration 100, Oral and Written Communication in Business
Business Administration 130, Operations Management
Economics 132, Money, the financial system and the economy
Business Administration 140, Legal Environment of Business
Business Administration 150, Organizational Behavior
Business Administration 160, Principles of Marketing
Business Administration 170, Management Accounting
Business Administration 180, Business Financial Management
Business Administration 190, Administrative Policy

These core courses, with the required program in the General College during the freshman and sophomore years, form the background for additional courses in business administration. Specific details are presented in the catalog of the Kenan-Flagler Business School.

Minor in Business Administration

The Undergraduate Business Program also offers a minor in business administration designed as an alternative plan for juniors or seniors who wish to combine the traditional liberal arts major with the disciplines of the business core curriculum. Admissions procedures for the minor take place in the spring semester for matriculation the following fall semester. Because of limited spaces, admission to the minor program is competitive.

The prerequisite courses for the minor program are Business Administration 24, Introduction to Management Science and Business Administration 71, and Basic Accounting Principles. It is strongly recommended that the applicant be proficient in using the computer for spread sheet analysis and word processing.

All students accepted into the minor program will take five courses:

Business Administration 130, Operations Management
Business Administration 160, Principles of Marketing
Business Administration, 180 Principles of Financial Management
Business Administration 190, Administrative Policy.

The fifth course is chosen from:

Business Administration 140, Legal Environment of Business
Business Administration 150, Organizational Behavior
Business Administration 170, Management Accounting.

The Undergraduate Program sponsors several organizations, including the Association of Business Students, the Black Business Student Alliance, and Carolina Women in Business. Each fall the Undergraduate Business Symposium hosts senior executives from around the country to speak with students and faculty about contemporary business topics.

For further information, please contact the Undergraduate Program office, 109 Carroll Hall.

Kenan-Flagler Business School Curriculum

The curriculum that leads to the degree of BSBA is described in detail in a separate bulletin of the Kenan-Flagler Business School, which may be obtained by writing to the Director of the Undergraduate Program.

The following courses are prerequisites for all Business Administration courses numbered 90 or 100: Business Administration 24 and 71; Economics 10 and 100 or 101.

***24 Introduction to Management Science** (3). Prerequisite, Mathematics 22 or 31 and Statistics 23. Statistical techniques for analyzing business problems. Topics include estimation, hypothesis testing, regression, time series, linear programming; also an introduction to the use of the computer. Fall and spring. Staff.

**After receiving credit for BUSI 24, business majors may not receive credit for Economics 70.*

71 Accounting Principles (3). Prerequisite, Economics 10 or equivalent. Role of accounting; basic concepts and methodology; mass data processing; valuation and income determination principles; management and internal control problems and basic financial statement components. Fall and spring. Hoffman.

96 Introduction to Microcomputers (1). An introduction to the design and use of LOTUS spreadsheets or microcomputers. Fall and spring. Staff.

97 Selected Topics in Business Administration (3). Prerequisite, permission of the instructor. Individual study in a special field with the direction of a member of the department. Fall and spring. Staff.

Courses for Graduates and Advanced Undergraduates

100 Oral and Written Communication in Business (3). Analysis of basic types of business presentations in a variety of business settings. Instruction, coaching, and practice presentations are combined to increase business presentation skills.

110 Deterministic Models for Decision Problems (3). Prerequisite, Business Administration 24 or equivalent. The use of quantitative tools for formulating, solving, and analyzing deterministic decision problems. Topics include linear programming, network models, and dynamic programming. Fall and spring. Staff.

111 Probabilistic Models for Decision Problems (3). Prerequisite, Business Administration 24 or equivalent. The use of quantitative tools for formulating, solving, and analyzing probabilistic decision problems. Topics include decision analysis, simulation, queueing, inventory control, and reliability. Spring. Staff.

120 Risk Management (3). Analysis of the financial problems inherent in the multitude of static risks that confront the business enterprise, and evaluation of the alternative methods of dealing with such problems utilized in modern scientific risk management. Fall or spring. Lee.

121 Life Insurance and Estate Planning (3). Basic life insurance, corporate employee benefits and estate planning. Includes wills, trusts, taxation, and business insurance. Fall or spring. Lee.

122 Advanced Risk Management and Insurance (3). Prerequisite, Business Administration 120 or equivalent. An analysis of risk measurement and a study of insurance devices to combat risk in the business firm. Fall and spring. Lee.

126 Introduction to Real Property (3). An introduction to the social, political, economic, and investment aspects of real property. Fall or spring. Staff.

130 Operations Management (3). Analysis of the production/operations function in both manufacturing and nonmanufacturing organizations. Developing production policies which support total organizational goals under varying constraints. Fall and spring. Staff.

131 Operations Management (3). Prerequisite, Operations Management 130 or equivalent. A case analysis course developing a general management perspective on strategy formulation in the operations function and emphasizing operations linkages to the market place. Fall. Berry, Elvers.

133 Design and Operation of Production Systems (3). Prerequisite, Business Administration 130 or equivalent. The design of modern manufacturing planning and control systems, production planning, master production scheduling, material and capacity planning, shop floor control, and Just-In-Time manufacturing methods. Spring. Berry.

134 Service Operations (3). Prerequisite, Operations Management 130 or equivalent. Includes service package development, yield management, scheduling, queueing, quality measurement, impact of technology, managing professional services including facilitator services (accounting, consulting, real estate, legal services). Fall. McLaughlin

137 Operations Logistics Management (3). Prerequisite, Business Administration 130 or equivalent. The integration of various managerial activities, e.g., purchasing, inventory control, which deal with the flow of materials into, through, and out of an organization. Fall and spring. Marucheck, Pannesi, Wagner.

140 Legal Environment of Business (3). An introduction to the legal system with special emphasis upon its relationship to business. Topics covered include an introduction to the judicial system, torts, and contracts. Fall and spring. Adler, Mann, Peirce, Roberts.

141 Commercial Law (3). Prerequisite, Business Administration 140 or equivalent. Not open to students who have taken Business Administration 144. A detailed examination of commercial law topics including sales, commercial paper, bank deposits and collections, secured transactions, suretyship, bank regulations, and bankruptcy. Fall and spring. Roberts, Adler.

142 Managerial Law (3). Prerequisite, Business Administration 140 or equivalent. Not open to students who have taken Business Administration 144. A detailed examination of the legal aspects of business organizations, including agency, joint ventures, partnerships, limited partnerships, corporations, and securities regulation. Fall and spring. Mann, Peirce.

143 Antitrust Law (3). Prerequisite, Business Administration 140 or equivalent. A detailed examination of the federal regulation of competition, including monopolies, oligopolies, horizontal and vertical restraints of trade and price discrimination. Fall. Roberts.

144 Business Law (3). Prerequisite, Business Administration 140 or equivalent. Not open to students who have taken either Business Administration 141 or Business Administration 142. A survey of commercial paper, secured transactions, sales, agency, partnerships, limited partnerships, corporations and securities regulation. Summer. Staff.

145 Labor Law (3). Prerequisite, Business Administration 140 or equivalent. The main focus of the course is on the Employer-Employee Relationship under the NLRA, including: employer/union unfair labor practices; picket, boycott, and strike activity; fair employment practices and the nonunionized employment environment. Fall. Peirce.

150 Organizational Behavior (3). An introduction to the study of human behavior in organizations. Examines from a managerial perspective the impact of individual, group, and organizational variables on organizational performance and employee satisfaction. Fall and spring. Bateman, Blackburn, Rosen, Shapiro.

152 Social Psychology of Organizations (3). Prerequisite, Business Administration 150 or equivalent. Systems analysis of behavior in organizations and its application to the management of human resources. Fall and spring. Blackburn, Victor.

153 Social-Technical Systems (3). Prerequisite, Business Administration 152 or equivalent. Advanced readings and intensive analysis and discussion of cases and problems in social-technical systems. Spring. Staff.

157 Human Resource Management (3). Prerequisite, Business Administration 150 or equivalent. Problems, policies, and procedures in the management of personnel, including topics such as staffing, performance appraisal, training, compensation, benefits and services, safety and health, equal employment, discipline, justice. Fall and spring. Blackburn, Rosen, Miguel.

158 Introduction to Labor-Management Relations (3). An introduction to labor-management relations with particular emphasis on the collective bargaining process. Topics include labor law, management rights, grievance/arbitration process, and labor-management cooperation. Spring. Bigoness.

160 Principles of Marketing (3). Introduction to marketing with emphasis on the social and economic aspects of distribution, consumer problems, marketing functions and institutions, marketing methods and policies. Fall and spring. Staff.

161 Advertising (3). Prerequisite, Business Administration 160 or equivalent. The organization and functions of advertising. Topics include economic and social aspects; types of advertising and advertising objectives; developing advertising messages; media selection and evaluation; advertising research. Fall and spring. Armstrong, Staff.

163 Sales Management (3). Prerequisite, Business Administration 160 or equivalent. An overview of the sales management process, including sales force planning, budgeting, recruiting, selection, training, compensation, supervision, and control. Fall and spring. Hughes.

164 Consumer Behavior (3). Prerequisite, Business Administration 160 or equivalent. Review of conceptual models and empirical research in consumer behavior. Topics include decision processes, social and cultural influences, information processing, and ethical issues. Fall and spring. Didow.

165 Retailing (3). Prerequisite, Business Administration 160 or equivalent. A study of the place of retailing in the economy. Topics include development of the present retail structure, functions performed, principles governing effective operations, modern store policies and practices, and managerial problems. Fall. Staff.

168 Introduction to Marketing Research (3). Prerequisites, Business Administration 24 and 160 or equivalents. An introduction to research methodology with emphasis upon the compilation, analysis and interpretation of data used in the planning and control of marketing operations. Fall or spring. Bloom, Mason, Bayus.

169 Marketing Policies (3). Prerequisites, Business Administration 160 or equivalent, and senior standing. A problem method course dealing with specialized marketing functions and policies: includes product and lines, brands, channels of distribution, prices and pricing, promotion, and diagnosis and control. Fall and spring. Kendall, Workman.

170 Management Accounting (3). Prerequisite, Business Administration 71 or equivalent and prerequisite or corequisite Economics 100 or 101 or equivalent. Elements of accounting for management planning, budgeting and control. Emphasis is on management uses of accounting information. Fall and spring. Staff.

171 Intermediate Accounting I (3). Review of accounting cycle, income measurement and valuation issues related to current and long-term assets and liabilities, revenue realization concepts. Fall. Cox, Langenderfer.

172 Intermediate Accounting II (3). Prerequisite, Business Administration 171. Income measurement and valuation issues related to stockholders' equity, fair value issues, accounting changes, leases and pensions. Spring. Cox, Langenderfer.

180 Principles of Financial Management (3). Theoretical foundations of optimal financial policy. Problems and cases provide application of theory to financial decisions involving cash flow, capital structure, capital budgeting. Fall and spring. Zenner, Staff.

182 Theory and Application of Financial Management (3). Prerequisite, Business Administration 180 or equivalent. A follow-up course to Business Administration 180 which goes more deeply into the theory and application of financial management. Emphasis is placed on investment, financing, and dividend decisions. Fall and spring. Wiles, Pringle.

185 Financial Institutions and Markets (3). Prerequisite, Business Administration 180 or equivalent. Analysis of the operating policies of financial institutions and the effect of such policies upon the structure of the capital markets. Fall and spring. Wiles.

186 Investments (3). Prerequisite, Business Administration 180 or equivalent. A survey of investment principles and practices. Emphasis is given to the problems of security analysis and portfolio management with special attention to the investment problems of the individual investor. Fall and spring. McEnally, Snow.

189 International Finance (3). Prerequisite, Business Administration 180 or equivalent. An introduction to the international aspects of financial decision making. Builds on the foundation laid in the basic financial management course. Emphasis on topics of primary interest to the treasurer of a multinational corporation. Particular attention to the determination of exchange rates. Spring. Zenner.

190 Administrative Policy (3). Prerequisites, Business Administration 100, 130, 140, 150, 160. Open only to seniors majoring in business administration. Comprehensive analysis of administrative policy-making from a total organizational point of view, use of case analysis and written reports to develop integrative decision skills. Fall and spring. Anderson, Kesner, Lee, Pannesi, Zeithaml.

191 Introduction to International Business (3). Prerequisite, senior standing. Problems in operating overseas, including analysis of differences in country settings, legal and financial systems, and governmental policies affecting foreign operations. Fall or spring. Kendall.

192 Introduction to Management Information Systems (3). A survey of the elements and functions of management information systems and the principles underlying the design and management of effective systems. Fall. DesJardins.

194 Business and Society (3). Focuses on relationship between business, government, citizens, and social institutions in a democracy with a market economy. Spring. Staff.

199 Management Simulation (3). Open only to seniors majoring in business administration. A seminar simulating the operation of a more complex business enterprise. Student teams operate competing firms in an industrial environment simulated by a computer. Fall and spring. Anderson.

Master of Accounting Program Courses

The Kenan-Flagler Business School offers a five-year program in business and accounting leading to the joint conferral of the BSBA and Master of Accounting degrees. The program is structured in a "three-two" format: the first three years include General College and business core requirements, and the last two years are devoted to advanced study in accounting, business, and nonbusiness subjects.

Applications for the MAC program will be available for juniors in the Business School at the beginning of the spring semester. Acceptance is based on academic performance through the first 3 years, performance in accounting classes (BA 71, 170, 171, 172), SAT scores, and recommendations.

Following admission to the MAC Program, students complete two years of professional study including 21 - 27 additional hours of accounting, the remainder of the business core, plus electives from both business and nonbusiness areas chosen to satisfy specific interests.

240 Financial Accounting Research and Applications (3). Prerequisite, Business Administration 171 and 172, or equivalents. Provide necessary background and skills to analyze and research corporate financial reporting in light of contemporary accounting theory and practice.

241 Financial Accounting Theory (3). Prerequisite, Business Administration 171 and 172, or equivalents. Examination of current accounting theory construction, verification and implementation.

242A Auditing (3). A course in auditing theory and practice. Auditing standards, procedures, rules of professional conduct, and related materials of professional importance are studied.

242B Advanced Auditing (3). Prerequisite, Business Administration 242A or equivalent. The development of an understanding of 1) accounting internal control issues in computer-based systems and 2) generalized and special purpose audit software.

243 Advanced Management Accounting (3). Prerequisite, Business Administration 170. Study of cost accounting systems, including cost accumulation, cost measurement and choice of costs to be included in the measurement.

244 Principles of Federal Income Taxation (3). Prerequisite, Business Administration 172 or permission of instructor. Underlying principles of the Federal income tax law with emphasis on individuals; problem recognition and tax planning emphasis.

245 Tax Research (3). Prerequisite, Business Administration 244, 277, or equivalent. A study of the techniques of research in taxation applied to routine and complex tax problems. Concentration on locating and assessing authority, and formal communication.

246A Federal Income Taxation of Corporations and Shareholders (3). Prerequisite, Business Administration 244. An advanced study of corporate taxation with emphasis on Subchapter C: corporate organization, distributions, liquidation, reorganizations, and special corporate problems.

246B Federal Income Taxation of Partnerships and S Corporations (3). Prerequisite, Business Administration 244. An advanced study of federal income taxation of partners and partnerships including formation, operation and termination; a study of S corporations and effects of an S election on shareholders.

246D Estate, Trust, and Gift Taxation (3). Prerequisite, Business Administration 244. A study of Federal estate and gift taxation, income taxation of estates and trusts. Emphasis on tax aspects of income gift and estate planning.

248A Accounting for Mergers and Acquisitions (1 1/2). Prerequisite, Business Administration 172. Advanced topics including foreign exchange, business combinations, home office and branches and consolidations.

248B Not-For-Profit Accounting (1 1/2). Prerequisite, Business Administration 172. Advanced topics dealing with governmental units and not-for-profit entities.

248 C Taxation of Business Entities. Tax principles applied to the formation, operation and dissolution of corporations and partnerships.

249 Professional Accounting Policy and Practice (3). Taken in last semester prior to receiving MAC degree. Bridge between the study of accounting by students and the practice of accounting by professionals. Understand professional accounting problems with emphasis on formulating communication skills.

272 Accounting Information Systems. (3). Prerequisite Business Administration 172 or equivalents. Study of the design, operations, and control of accounting information systems and their integration with other information systems. Fall.

273 Management Accounting Theory and Practice. Role of accounting and the information function within organizations, management decision models, analysis and financial controls.

277 Taxes and Global Business Strategy. Significance of taxes relevant to business decisions; tax factors and other considerations influencing the decision process.

278 Advanced Financial Accounting Topics. Concepts and methods underlying financial reporting; analysis and use of financial accounting data.

The School of Education

Donald J. Stedman, Ph.D., *Dean*
Walter B. Pryzwansky, Ed.D., *Associate Dean for Academic Programs*
Alan R. Tom, Ph.D., *Director of Teacher Education*
Dixie Lee Spiegel, Ph.D., *Assistant Dean for Students*

The School of Education offers programs of study beginning in the junior year to undergraduate students who plan to follow careers in the field of teaching. These programs are designed to prepare students to teach at one of the following levels: elementary (grades K - 6); middle grades (grades 6 - 9); secondary (grades 9 - 12); special subjects (grades K - 12).

A student majors in one of the following program areas: (1) elementary education at the early childhood or intermediate level; (2) middle grades education; (3) secondary education in English, Latin, mathetmatics, science, or social studies; or (4) one of the special subjects, which are modern foreign language education, physical education, or music education.

Students are admitted to the School of Education as transfers from the General College and, on a very limited, space-available basis, from other departments of UNC-Chapel Hill or other institutions.

In order to provide a quality preprofessional program which includes a set of effective clinical experiences, the School must accept only the number of students that can be appropriately supported by available faculty and community resources. Therefore, admissions to the School of Education are limited.

The criteria for admission include, but may not be limited to, academic progress, commitment to the teaching profession and children, and passing scores on the General Knowledge and Communication Skills portions of the National Teacher Examination (NTE). Special consideration is given to students with teaching-related scholarships and to students who would enhance the diversity of the teaching profession. Two letters of recommendation are required. In addition, students must have a minimum grade point average of 2.5 by the end of their fourth semester to be formally admitted. However, attainment of a 2.5 grade point average does not guarantee admission.

Applications are available in 114 and 116 Steele Building. Interested students should check with the General College Education Adviser about the application deadline.

Each degree-seeking student is required to fulfill the General College requirements (usually in the freshman and sophomore years); to select courses appropriate to the major field of concentration; to take courses in education designed to meet teacher certification requirements; and to fully comply with all regulations and requirements for graduation from the University.

Once students are admitted to the School of Education, they begin their professional program. Courses with field experiences must be taken in a specific sequence: EDUC 55-Child Development or EDUC 56-Adolescent Development is a prerequisite for EDUC 54-Social Concepts in Education and for EDUC 51, if required -Teaching Reading and the Related Language Arts. Other professional courses (EDUC 72-Psychology of Learning; EDUC 45-Basic Media Skills; EDUC 12, if required- Elementary Math; and EDUC 153-Content-Area Reading and Writing are not sequenced but must be completed before student teaching.

Middle grades students begin professional education in a clinically based program in the junior year. EDUC 65-The Teaching Profession and EDUC 66-Planning for Instruction are taken in the fall semester. During the spring

semester students take EDUC 69-Teaching Skills Laboratory. In the senior year, EDUC 95-Teaching in the Middle Grades is taken in the fall semester. The spring semester is comprised of EDUC 96-Teaching Internship and EDUC 97-Seminar on Teaching. All professional courses for the middle grades major are required and must be taken in sequence.

The School of Education has an honors program for exceptional junior and senior education majors. During the spring semester of the junior year, an honors student in education participates in the honors seminar. During the senior semester in which the student is not student teaching, the student prepares an honors thesis, on which there will be an oral examination. The program is limited in enrollment and open to students with a grade point average of at least 3.4 on a space-available basis.

Degrees Offered

The following degrees are awarded to students completing undergraduate programs of study in the School of Education: Bachelor of Arts in Education (early childhood, intermediate, middle grades, special subjects, and secondary areas); Bachelor of Music Education; and Bachelor of Science in Science Teaching (secondary).

Graduation Requirements

In addition to the general University requirements for graduation stated in "Regulations" of this bulletin, a student who secures a degree in the School of Education must meet each of the following minimum requirements:

1. A minimum of 120 semester hours of credit, plus two one-hour physical education activity courses, with a final cumulative grade point average of not less than 2.0. The last 30 hours of a degree program must be taken in residence at UNC-Chapel Hill.
2. The freshman-sophomore pattern of courses required by the General College and a distribution of courses in the junior and senior years that meets the requirements for the student's particular major pattern as described below.
3. A satisfactory teaching major in early childhood or intermediate education or in one of the teaching areas at the middle grades or secondary school level or in a special subjects area.
4. For elementary education students, completion of the requirements for a second major academic concentration in a College of Arts and Sciences program.
5. A grade of C (2.0) or better on all professional course work in the School of Education and on at least 18 semester hours of work in the major teaching field and an overall C (2.0) average in the major teaching field.

Professional Program

In the senior year, during either fall or spring, students (except those in Middle Grades Education) spend a full semester in specified professional courses. This semester is referred to as the "professional block," and students may not enroll in other courses during this semester nor hold a job. Because some of the professional block areas are offered only fall or spring semester, it is imperative that students plan their programs during the junior year to assure registering for the designated professional block during the appropriate semester of the senior year. All EDUC courses and all General College requirements must be completed before the block semester. In addition, many specialty areas require that specific courses be completed before the block. Students should consult their advisement worksheets in order to identify those courses.

Student teachers are expected to abide by the public school calendar once they begin full-time student teaching. This means that, in most years, student teachers will not be able to take University Fall Break or University Spring Break, whichever falls in the student teaching period.

Students should plan in advance of the block semester for housing, since they may or may not be placed in the Chapel Hill area for student teaching. Most students will find that a car is necessary.

Because of the professional nature of the curriculum in the School of Education, it is not possible for a student to simultaneously pursue a degree in education and a degree in any other school or department at UNC-Chapel Hill, nor is it possible for students in other departments to minor in education.

North Carolina certification of teachers and special service personnel is independent of degree requirements. Prior to receiving formal admission to the teacher education program, students must satisfactorily complete Core Batteries 1 (Communication Skills) and 2 (General Knowledge) of the National Teachers Examination (NTE). This normally is taken in the fall of the sophomore year. In their senior year, students who plan to obtain certification upon graduation must also pass Core Battery 3 (Professional Knowledge) and the appropriate Specialty Area test of the NTE. Fees are charged for all NTE examinations. Information and application forms are available at the University Counseling Center in Nash Hall.

Early in the semester in which a student plans to graduate, he or she should complete an application for initial teacher certification in North Carolina. Application forms are available in 103 Peabody Hall. Students also must file their NTE scores with the application for certification

Shortly after the official graduation date, the application is processed and forwarded to the Division of Certification of the North Carolina State Department of Public Instruction.

The programs described below are approved by both the Division of Certification of the N.C. State Department of Public Instruction and the National Council for the Accreditation of Teacher Education. A student interested in becoming a teacher should consult with the General College Education Adviser, or Anne Coenen in 103 Peabody Hall for more specific information regarding a particular program.

Elementary Education: (Early Childhood and Intermediate) Kindergarten-Grade Six

The elementary education programs (early childhood and intermediate) at the undergraduate level (A.B. in Education degree) provide students with a broad academic background in specific professional education necessary to function as teachers of young children through grade six. In satisfying the requirements of the General College of the University, which cover the freshman and sophomore years, each student should choose as many of the courses listed below as possible. During the junior and senior years, the professional education courses and student teaching will provide a range of experiences which will include working with children at the various levels identified with the elementary programs.

***Total Credit Hours Required** **120 Hours**

(Minimun requirement; some major academic concentrations require more hours than others. In addition, two 1-hr. PHYA activity courses must be taken.)

***General College**	**46-57 hours**
Basic Skills	
English composition courses	**6 hours**
Foreign language courses	**3-11 hours**
Mathematical science courses	**3-6 hours**
Perspectives	
Aesthetic Perspective	**6 hours**
1 literature course	3
One from ART 31, 32, 33, 34, 35, 36 37, 39, 43, MUSC 40, 42, 45, DRAM 15, 16, 20, or PHYE 93	3
Natural Sciences Perspective	**13 hours**
(One science course below must have a lab)	
1 biological science course	**3-4**
1 physical science course	**3-4**
PSYC 10	3
1 additional natural science course	**3-4**
Philosophical Perspective	**3 hours**
1 course	3
Social Science Perspective	**6 hours**
Two from POLI 41, ECON 10, ANTH 41, SOCI 30, or GEOG 20	6
Western Historical Perspective	**6 hours**
1 pre-1700 western history course	3
1 other history course (Am. Hist. suggested)	3

***Courses Related to Teaching Methods**	**15 hours**
PHYE 74	3
INLS 92	3
EDUC 4	3
MUSC 20	3
One from SPCH 153, 156, or EDUC 143	3

***Professional Education**	**30.5 hours**
EDUC 12 - Teaching Mathematics	3
EDUC 45 - Basic Media Skills	1.5
EDUC 51 - Teaching Reading & Language Arts	4
EDUC 54 - Social Concepts in Education	3
EDUC 55 - Child Development	4
EDUC 72 - Psychology of Learning	3
EDUC 60 - Teaching in the Elementary School	3
EDUC 61 - Methods & Materials for Teaching	3
EDUC 62 - Student Teaching	6

***Major Academic Concentration** **24-49 hours**

Elementary education students must select a major academic concentration from one of the two lists of College of Arts and Sciences programs shown below. Completing the previously described requirements for one of the elementary education programs and the requirements for one of the programs below (except the junior-senior perspectives) will give students a double major, one in the College of Arts and Sciences and one in the School of Education. The School of Education recommends that teacher candidates select a concentration from the "preferred" list, as these areas are consistent with public elementary school programs in which the student may eventually choose to teach.

Preferred

Anthropology; Art History; Astronomy; Biology; Chemistry; Economics; English; French; Geography; Geology; History; Mathematics; Philosophy; Physics; Political Science; Psychology; Sociology; Spanish.

Optional

Afro-American Studies; American Studies; African Studies; Classical Archaeology; Classical Civilization; Art (Studio); Dramatic Art; East Asian Studies; Comparative Literature; Greek; International Studies; German; Latin; Latin-American Studies; Italian; Music; Peace, War, and Defense; Linguistics; Public Policy Analysis; Religious Studies; Portuguese; Russian; Russian and East European Studies; Speech Communication.

*** Electives 4.5 hours**

Middle Grades Education: Grades Six-Nine

The middle grades education program at the undergraduate level (A.B in Education degree) provides sutdents with a strong academic background and the specific professional education necessary to function as teachers in middle schools and junior high schools (grades six through nine). Students selecting the middle grades program must complete the General College requirements of the University (freshman and sophomore years). Students working for this degree will be required to have two academic concentrations; one will be the major and one will be a minor concentration. In addition, students complete the professional education courses during their junior and senior years.

***Total Credit Hours Required** **120 hours**

(Minimum requirement; some major and minor academic concentrations require more hours than others. In addition, two 1-hr. PHYA activity courses must be taken.)

***General College** **45-60 hours**

The following courses are required OR recommended, as shown, to fulfill the indicated General College perspectives:

Language Arts Concentration
Required:
LING 30 (Social Studies)
ENGL 23W or 25W (Literature)
One from ENGL 42, RTVMP 26, DRAM 15, 16, or 20 (Fine Arts)
Recommended:
HIST 11 (Pre-1700 Western History)
HIST 12 or AFAM 40 (History)

Social Studies Concentration
Required:
HIST 11 (Pre-1700 Western History)
HIST 12 (History)
GEOG 20 or ANTH 41 or 49 (Social Studies)
Recommended:
COMP 14 (Mathematics)
PHIL 20 or 37 (Philosophy)
BIOL 11 & llL and GEOG 10 (Natural Science)

Mathematics Concentration
No required or recommended courses

Science Concentration
Recommended: COMP 14 (Mathematics)

***Professional Education (in sequence)**	**30 hours**
EDUC 65 - The Teaching Profession	1.5
EDUC 66 - Planning for Teaching	4.5
EDUC 69 - Teaching Skills Laboratory	3
EDUC 95 - Teaching in the Middle Grades	6
EDUC 96 - Teaching Internship	12
EDUC 97 - Seminar on Teaching	3

***Major Academic Concentrations**	**21-34 hours**
Language Arts	**21 hours**
ENGL 30 or 31 (31 preferred)	3
ENGL 36 or 38	3
ENGL 58	3
One from ENGL 146, 185, 186, 187, or 189	3
One from ENGL 73, 78, 81, 84, 85, 86 or 88	3
SPCH 41	
INLS 122	

Mathematics	**27 hours**
MATH 31 (OK for Gen. Coll. requirements)	3
MATH 32 (OK for Gen. Coll. requirements,	3
MATH 81	3
MATH 33 or STAT 23	3
MATH 83 or 116	3
MATH 115 or 131	3
COMP 4 or 14	3
MATH elective above 110	3
EDUC 12	3
(Note: Some of the courses above have prerequisites.)	

Social Studies	**21 hours**
ECON 10	3
HIST 22 or 75	3
HIST 31	3
HIST 66 or 67	3
POLI 41	3
One from SOCI 10, 11, or 30	3
One from HIST 33, 38, 39, 83, 86, 193, 195, 197, POLI 54, 57, or 85	3

Science	**31-34 hours**
BIOL 11 and 11L	4
CHEM 11 and 11L	4
GEOL 11 and 11L	4
PHYS 20 or 24, and lab	4
ASTR 31 and 11L, or GEOG 11	3-4
Two from BIOL 41, 53, 54, 55, 73, and 73L, 101, 105, 108, 114, or GEOL 46	6-8
MATH 31, 32, or 33	3
One other MATH or STAT course	3
(General College courses may be used to fulfill middle grades requirements.)	

***Minor Academic Concentrations**	**15-21 hours**
Language Arts Minor	**15 hours**
ENGL 30 or 31	3
ENGL 36 or 38	3
One from ENGL 23W, 25W, 34, 34P, 35, or 35P	3
INLS 122	3
One from ENGL 73, 78, 80, 81, 84, 85, 86, or 88	3

Mathematics Minor	**21 hours**
Two from MATH 30, 31, or 32	6
MATH 81	3
MATH 115 or 131	3
COMP 4 or 14	3
One from MATH 33, 116, or STAT 23	3
EDUC 12 (recommended)	3
(Note: Some of the courses above have prerequisites.)	

Social Studies Minor	**18 hours**
GEOG 20	3
One from ANTH 41, 49, SOCI 10, 11, or 30	3
HIST 66 or 67	3
POLI 41 or ECON 10	3
Two from HIST 31, 33, 38, 39, 83, 86, 94C, 193, 195, 197, POLI 54, 57, or 85	6

Science Minor	**19 - 20 hours**
BIOL 11 and 11L	4
CHEM 11 and 11L	4
GEOL 11 and 11L	4
PHYS 20 or 24, and lab	4
ASTR 31 and 31L or GEOG 11	3-4

***Electives**	**0-9 hours**

Secondary Education: Grades Nine-Twelve
Students who wish to teach in the various secondary subjects (high school level) will earn the A.B. in Education with a major in English, Latin, social studies, or mathematics; or they will earn the B.S.S.T., the Bachelor of Science in Science Teaching. To do so and to become eligible for certification by the state, they must complete the requirements of the General College of the University (freshman and sophomore years), complete the required professional education courses, and complete a teaching major in the subject of interest.

***Total Credit Hours Required**	**120 hours**

(Minimum requirement; some majors require more hours than others. In addition, two 1-hr PHYA activity course must be taken.)

***General College**	**40-52 hours**
Basic Skills	
English composition courses	**6 hours**

Foreign language courses	3-11 hours
Mathematical sciences courses	3-6 hours

Perspectives

Aesthetic Perspective	*6 hours*
1 literature course	3
1 fine arts course	3
Natural Science Perspective	7 -8 hours
1 science course with lab	4
1 science course with or without lab	3-4

(Instead of this requirement, science education majors must complete a total of 7 science foundations courses, all with labs, as shown under the science major requirements.)

Philosophical Perspective	3 hours
1 course	3
Social Science Perspective	6 hours
2 courses	6
Western Historical Perspective	6 hours
1 pre-1700 western history course	3
1 other history course	3

***Professional Education** **25.5-31.5 hours**

[Courses with an asterisk(*) must be taken before the professional block.]

*EDUC 56 - Adolescent Development (prerequisite for EDUC 54)	3
*EDUC 54 - Social Concepts in EDUC	3
*EDUC 45 - Basic Media Skills	1.5
*EDUC 72 - Psychology of Learning	3
*EDUC 153 - Teaching Reading	3
Appropriate methods course (professional block)	6
Student teaching (professional block)	6-12

***Major Subject**

Students are required to choose one of the following teaching fields as their major subject: English, Latin, mathematics, social studies (with a concentration in either economics, geography, history, political science, sociology, or anthropology), or science (with a concentration in either biology, chemistry, physics, or earth science). Required courses for each field follow, with an asterisk(*) before the courses which must be taken before the professional block:

English	**36 hours**
ENGL 20	3
*ENGL 21 or 22	3
*ENGL 31	3
*ENGL 36	3
ENGL 38	3
*ENGL 58	3
ENGL 84 or 85	3
*ENGL 80, 81, 82, or 83	3
*SPCH 41	3
One from ENGL 51, 52, 54, 60, 64, 65, 66, or CMPL 21	3
One from ENGL 43, 72, 73, 78, 94, or CMPL 22	3
One ENGL elective	3

Latin	**27 hours**
LATN 21	3
LATN 110	3
CLAS 35	3
CLAS 36	3
Five other courses in LATN above 21	15

Mathematics	**27 hours**
MATH 33	3
MATH 81	3
MATH 83	3
MATH 115	3
MATH 131	3
MATH 120 or 146	3
MATH 133, 134 or 138	3
MATH 110 or higher	3
COMP 14	3

Science **55-60 hours**

Students who choose science as their teaching field will receive the Bachelor of Science in Science Teaching upon completion of the following foundation courses and the courses required for the field they have chosen for a concentration:

Science Foundation Courses	**28 hours**
BIOL 11 and 11L	4
CHEM 11 and 11L	4
CHEM 21 and 21L	4
GEOL 11 and 11L	4
PHYS 24 and 24L	4
PHYS 25 and 25L	4
ASTR 31 and 31L	4

Science Concentrations

Biology	*28 hours*
BIOL 52	4
BIOL 53	4
BIOL 54	4
BIOL 41, 43, 47, or 51	4
BIOL 108 and 108L	4
BIOL 63, 73, or 80, and lab	4
One from BIOL 103, 104, 105, 120, or 122, and lab	4

Chemistry	*27-30 hours*
MATH 32	3
CHEM 41 and 41L	4
CHEM 51	2
CHEM 61	2
CHEM 62 and 62L	4
CHEM 170L	2
CHEM 180 or 181	3
CHEM 140, 150, or 182	3
CHEM 121, 130, 160, or 171L	2-3
CHEM One elective	2-4

Physics	*29-32 hours*
MATH 32	3
MATH 33	3
PHYS 52	3
PHYS 58	3
PHYS 101	4
PHYS 102	4
PHYS Three electives	9-12

Earth Science (Geology)	*28-30 hours*
GEOL 42 and 42L	3-4
GEOL 48	3
GEOL 52	4
GEOL 53	4
GEOL 55	4
GEOL 188	4
GEOG 110	3
GEOL One elective	3-4

Social Studies **48-51 hours**

Students who choose social studies as their teaching field must complete the following foundation courses and the courses required for the field they choose for a concentration.

Social Studies Foundation Courses :	**36 hours**
ANTH 41	3
ECON 10, 100	6
GEOG 10, 20	6
HIST 11, 12, 21, 22	12
POLI 41, 86	6
SOCI 10	3

Social Studies Concentrations:

Economics	*18 hours*
ECON 59	3
ECON 70	3
ECON 130	3
ECON 135 or 67 or 163	3
ECON 141	3
One from ECON 111, 122, 145, 146, 151, 158, 161, 165, 166, 167, 191	3

Geography	18 hours
GEOG 148	3
GEOG 150	3
GEOG 151	3
GEOG 156	3
GEOG 70 or 171	3
One regional course	3

History	**12 hours**
HIST 18	3
HIST 34 or 38 or 39	3
Two from HIST 64, 71, 117, 119, 142, 150, 157, 158, 161, 162, 167, 168	6

Political Science	**18 hours**
POLI 42	3
POLI 71	3
One from POLI 50, 52, 53, 54, 55, 56, 57, 58, 59, 60	3
One from POLI 61, 62, 64, 66, 68	3
One from POLI 161, 162, 163, 165, 166, 167, 168	3
One from POLI 110, 140, 141, 155, 171, 173, 179	3

Sociology	**21 hours**
SOCI 20	3
SOCI 7 1 or 33	3
SOCI 50	3
SOCI 51	3
SOCI 52	3
Two from SOCI 21, 79, 132, 133, 143, 150, 163	6

Anthropology	**15 hours**
ANTH 122	3
ANTH 186	3
One from three of the following four groups:	
ANTH 100, 150	3
ANTH 43, 112, 117	3
ANTH 26, 36, 126, 130	3
ANTH 184, LING 170	3

Special Subjects: Kindergarten - Grade Twelve

A student who wishes to earn the A.B. in Education degree to teach music, physical education or a modern foreign language (French, German, or Spanish), may be certified in North Carolina for the entire range from the kindergarten level through grade twelve upon completion of the approved program of study. A student wishing to get a degree and certification in one of these special subjects must first complete the requirements of the General College of the University (freshman and sophomore years), complete the required professional education courses, and complete a teaching major in the subject of interest.

***Total Credit Hours Required** **120 hours**

(Minimum requirement; some majors require more hours than others. In addition, two 1-hr PHYA activity courses must be taken.)

***General College**	**39-52 hours**
Basic Skills	
English composition courses	**6 hours**
Foreign language courses	**3-11 hours**
Mathematical science courses	**3-6 hours**
Perspectives	
Aesthetic Perspective	**6 hours**
1 literature course	3
1 fine arts course	3
Natural Science Perspective	**6-8 hours**
1 science course with lab	3-4
1 science course with or without lab	3-4
Philosophical Perspective	**3 hours**
1 course	3
Social Science Perspective	**6 hours**
1 course (Linguistics 30 for foreign languages)	3
1 other course	3
Western Historical Perspective	**6 hours**
1 pre-1700 western history course	3
1 other history course	3

***Professional Education** **26.5-41.5 hours**

[Courses with an asterisk(*) must be taken before the professional block.]

*EDUC 56 - Adolescent Development (prerequisite for EDUC 54)	4
*EDUC 54 - Social Concepts in Education	3
*EDUC 45 - Basic Media Skills	1.5
*EDUC 72 - Psychology of Learning	3
*EDUC 57 - Introduction to Music Education (music only)	(2)
*EDUC 153 - (or 51 in foreign language) Teaching Reading	3-4
*EDUC 83 - Methods (foreign language only, fall, sr.yr.)	(6)
Appropriate methods course(s) (professional block)	6
Student teaching (professional block)	6-12

***Major Subject**

Students are required to choose one of the following teaching fields as their major subject: music, physical education, or modern foreign language (with the major in either French, German, or Spanish). Required courses for each field follow:

Music

Students who choose music as their major field must take the following courses or their equivalents. Several of the courses may be taken in the freshman or sophomore years, but because the General College requirements for this

program vary from those of other programs in education, the student should consult the music education adviser in the Department of Music in Hill Hall.

Music History, Literature, & Theory	**28 hours**
MUSC 32	3
MUSC 36x or proficiency	0
MUSC 36a	1
MUSC 36b	1
MUSC 37	3
MUSC 38	3
MUSC 52	3
MUSC 52x or proficiency	0.5
MUSC 53	3
MUSC 53x or proficiency	0.5
MUSC 54	3
MUSC 67	3
MUSC 68	2
MUSC 78	2

Music Performance (Instrumental or Vocal)	**14 hours**
7 semesters of satisfactory performance, 2 hrs. each	14

Music Techniques	**7 hours**
MUSC 2z or 60	1
MUSC 3z	1
MUSC 72	1
MUSC 4z	1
MUSC 4z or 73	1
MUSC 5z	1
MUSC 6z	1

Music Ensembles	**7 hours**
7 semesters of large ensemble, 1 hr. each (except piano, organ, and guitar students: 5 semesters of large ensemble, 1 hr. each, + 4 semesters of keyboard or guitar ensemble, 1/2 hr. each)	7

Foreign Language

Students must select as their major subject either French, German, or Spanish. The requirements for each are listed below. In addition, the students must take a foreign language proficiency examination during their junior year and must score at the ACTFL Advanced Plus level. Students should contact their adviser to arrange to take it before March 1 of the junior year.

French	**30-31 hours**
FREN 21	3
FREN 23	3
FREN 50	3
FREN 51	3
FREN 52	3
FREN 145	3
FREN 146	3
Two from FREN 60, 61, or 62	6
1 child development course	3-4

German	**30-31 hours**
GERM 21	3
GERM 31	3
GERM 32	3
GERM 68	3
GERM 100	3
Four from GERM 70, 71, 72, 73, 80, 81, 82, 95, or selected 100-level courses	12
1 child development course	3-4

Spanish	**33-34 hours**
SPAN 21	3
SPAN 23	3
SPAN 50	3
SPAN 51	3
SPAN 52	3
SPAN 53 or 54	3
SPAN 145	3
SPAN 146	3
Two from SPAN 71, 72, or 73	6
1 child development course	3-4

Physical Education	**36 hours**
PHYE 55	3
PHYE 56	3
PHYE 57	3
PHYE 77	3
PHYE 79	3
PHYE 80	3
PHYE 81	3
PHYE 85	3
PHYE 86	3
PHYE 87	3
PHYE 88	3
PHYE 89	3

Concentrations

All students in physical education are required to complete a concentration in interdisciplinary studies or in another department, in addition to the physical education major requirements. Options for the concentration are listed below:

Interdisciplinary Major - Biophysical Studies, Art History, Economics, English, French, Geography, German, History, Latin, Mathematics, Political Science, Spanish.

The Interdisciplinary Major - Biophysical Studies concentration encompasses courses in three departments: physical education, biology, and either psychology, sociology, or nutrition. In addition to the requirements shown above for the physical education major, students must take the following courses:

BIOL 45 and 63L	4
BIOL 52	4
BIOL 62 and 62L	4
Two specified courses from PSYC or SOCI or NUTR	6

Courses for Undergraduates

EDUC 4* Arts and Crafts for Elementary Teachers (3). Introduction to developmental aspects of children's art and to the application of art materials and processes to teaching at the elementary and intermediate levels. Fall, spring. and summer. Staff.

EDUC. 12* Mathematics in Early Chidhood and Intermediate Education (3). Provides a study of the mathematics content of elementary programs, including materials, techniques, and teaching aids. Prerequisite, one college-level math course. Fall, spring, and summer. Ballew.

EDUC. 31 Career Exploration (1). Provides students an opportunity for exploration of career choices. Fall and spring. Brooks, D. Brown, Edgerly.

*Open only to majors in the School of Education or with permission of the Director of Teacher Education.

EDUC. 41 Education in American Society (3). Primarily for students not majoring in education and may be taken by education majors only as an elective. A reflective examination of beliefs and attitudes associated with (1) the historical, philosophical, sociological, political, and economic forces affecting education and schooling in the United States; (2) the structure and function of the school system; and (3) current issues and trends in American schooling and education. Fall, spring, and summer. Unks.

EDUC 45* Basic Media Skills (1.5). Provides instruction and practice in selecting, planning, producing, and using media for teaching. Includes hands-on experience with instructional materials and equipment. Fall and spring. Wileman.

EDUC 51* Teaching Reading and the Related Language Arts (K-6) (4). A survey course for K-6 majors on the nature of reading and other language arts. In addition to lectures and laboratories, students work with elementary-level pupils at a local public school. Required of all K-6 majors and must be taken the semester preceding student teaching. Fall and spring. Cunningham, Fitzgerald, Spiegel.

EDUC 54* Social Concepts and Problems in American Education (3). Basic course in history and sociology of education for undergraduate students majoring in teacher education. Reviews major concepts of educational foundations and educational practice. Fall and spring. Unks.

EDUC 55* Child Development (4). Theories of child development and empirical research on child behavior, applied to the school setting at the early childhood and intermediate levels. Fall and spring. Coop, Meece.

EDUC 56* Adolescent Development (4). Theories of adolescent development and empirical research on adolescent behavior, applied to the middle grades and secondary levels. Fall and spring. Coop, Meece.

EDUC 57 Introduction to Music Education (2). An introduction to the historical and philosophical foundations of music education in the United States and to the role of the music teacher in the context of the school. Open to all music majors who have an interest in music education. Fall. Whitaker.

EDUC 60* Teaching Science and Social Studies in the Elementary Schools (3). Methods and materials for teaching science and social studies will be taught, with an emphasis on inquiry and an integrated unit approach. Prerequisites, EDUC 54 and 55. Fall. Brice.

EDUC 61* Theory and Practice of Teaching in the Elementary School (3). General theory and practice of teaching in the elementary school will be directly related to the student teaching experience. Fall and spring. Brice, Rogers, Webb, Wilkerson.

EDUC 62* Student Teaching in Elementary Grades (variable). Provides full-time experience in an elementary school classroom under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 61. Fall and spring. Brice, Rogers, Webb, Wilkerson.

EDUC 63* Health and Physical Education (3). (Teaching.) Taught six hours per week during the first half of the semester. Open only to seniors in the School of Education or with permission of the Director of Teacher Education. In this block program course, time is devoted to the study of appropriate methods and materials of teaching. Spring. Staff.

EDUC 64* Student Teaching Health and Physical Education (6). Provides full-time experience in a physical education setting under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 63. Spring. Staff.

EDUC 65* The Teaching Profession (1.5). (Offered concurrently with EDUC 66.) Students will be initiated into the teaching profession. The course stresses what it is like to be a teacher, with concurrent emphasis on the life of the student and the study of schools. Prerequisite, admission to the Middle Grades Teacher Education program. Fall. Staff.

*Open only to majors in the School of Education or with permission of the Director of Teacher Education.

EDUC 66* Planning for Teaching (4.5). (Offered concurrently with EDUC 65.) Students will learn basic skills for assessing characteristics of the student related to learning, selecting content for instruction, and planning a lesson. Prerequisite, admission to the Middle Grades Teacher Education Program. Fall. Staff.

EDUC 69* Teaching Skills Laboratory (3). Students will learn to perform a variety of basic teaching skills used by classroom teachers. This course will be conducted primarily as a laboratory course. Prerequisites, EDUC 65 and 66. Spring. White, Staff.

EDUC 72* Psychology of Learning (3). This course considers the components of teaching-learning situations, including motivation, teaching-learning strategies, classroom management, and testing and evaluation from a psychological perspective. (Sections 1,2,3 for early childhood and intermediate majors; Sections 4, 5, 6 for secondary and special subject majors.) Fall, spring, and summer. Schunk, Stuck, White.

EDUC 74* Elementary/Middle Grades General Music Methods (3). This course is designed to acquaint the student with a body of information, principles, and practices in general music education, as well as provide opportunities for the student to assume the role of a general music teacher in a variety of settings. Course open to students in the final semester of certification sequence. Spring. Whitaker.

EDUC 75* Methods and Materials in Instrumental Music (3). This course is designed to acquaint the student with a body of information, principles, and practices in instrumental music education, as well as provide opportunities for the student to assume the role of an instrumental music teacher in a variety of settings. Course open to students in final semester of certification sequence. Spring. Whitaker.

EDUC 76* Methods and Materials in Choral Music (3). This course is designed to acquaint the student with a body of information, principles, and practices in choral music education, as well as provide opportunities for the student to assume the role of a choral music teacher in a variety of settings. Course open to students in final semester of certification sequence. Spring. Huff.

EDUC 77* Student Teaching Elementary Music (6). Provides full-time experience in teaching elementary general music under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 74. Spring. Whitaker.

EDUC 78* Student Teaching Instrumental Music (6). Provides full-time experience in teaching instrumental music under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 75. Spring. Whitaker.

EDUC 79* Student Teaching Choral Music (6). Provides full-time experience in teaching choral music under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 76. Spring. Huff.

EDUC 81* Theory and Practice of Teaching English in the Secondary School (6). In this block program course, time is devoted to the study of the secondary school and appropriate methods and materials of teaching English. Fall. Hennis.

EDUC 82* Student Teaching English (6). Provides full-time experience in teaching English under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 81. Fall. Hennis, Palmer.

EDUC 83* Methods of Teaching Foreign Languages K-12 (6). This course is devoted to the appropriate methods and materials for the teaching of foreign languages. Prerequisite, senior majoring in foreign language education. Fall. Heining-Boynton.

EDUC 84* Student Teaching Foreign Languages K-12 (12). This course is devoted to the appropriate methods and materials for the teaching of foreign languages. Prerequisite, EDUC 83. Spring. Heining-Boynton.

*Open only to majors in the School of Education or with permission of the Director of Teacher Education.

EDUC 85* Theory and Practice of the Teaching of Social Studies in the Secondary School (6). In this block program course, time is devoted to study of the secondary school and appropriate methods and materials of teaching social studies. Fall. Staff.

EDUC 86* Student Teaching Social Studies (6). Provides full-time experience in teaching social studies under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 85. Fall. Staff.

EDUC 89* Theory and Practice of the Teaching of Mathematics in the Secondary School (6). In this block program course, time is devoted to study of the secondary school and appropriate methods and materials of teaching mathematics. Fall. Ballew.

EDUC 90* Student Teaching Mathematics (6). Provides full-time experience in teaching mathematics under the supervision of an experienced teacher and a University supervisor during ten or more weeks. Prerequisite, EDUC 89. Spring. Ballew.

EDUC 91* Theory and Practice of the Teaching of Science in the Secondary School (6). In this block program course, time is devoted to study of the secondary school and appropriate methods and materials of teaching science. Fall. Hounshell.

EDUC 92* Student Teaching Science (6). Provides full-time experience in teaching science under the supervision of an experienced teacher and University supervisor during ten or more weeks. Prerequisite, EDUC 91. Spring. Hounshell.

EDUC 93H* Honors Seminar in Education (3). Integration of critical analysis of selected educational themes, introduction to methods of educational research, and intensive work in skills of reading and writing critically. Required for graduation with honors in education. Spring. Prerequisite, honors candidate in the School of Education. Staff.

EDUC 94H* Honors Thesis in Education (3). Preparation of an honors thesis under the direction of a member of the School of Education faculty and an oral examination on the thesis. Required for graduation with honors in education. Prerequisite, EDUC 93H with a grade of "B" or better. Fall and spring. Staff.

EDUC 95* Teaching in the Middle Grades (6). Students will learn about the organization and curriculum of the middle grades, reading and writing in the content areas, the methods of teaching in their content areas, and unit planning. Prerequisites, EDUC 65, 66, and 69. Fall. Jones.

EDUC 96* Teaching Internship (variable). (Offered concurrently with EDUC 97). This internship gives students the opportunity to plan instruction and to teach with increasing degrees of responsibility. The internship will be in a school setting under the direct supervision of a classroom teacher. Prerequisites, EDUC 65, 66, 69, and 95. Spring. Jones, Staff.

EDUC 97* Seminar on Teaching (3). (Offered concurrently with EDUC 96). This seminar provides the student an opportunity to reflect on teaching and the teaching profession by integrating knowledge about teaching with observations about teaching made during the internship. Prerequisites, EDUC 65, 66, 69, and 95. Spring. Jones, Staff.

EDUC 99* The Secondary School (3). This course meets six hours each week during the first half of the semester in which student teaching is done. Required of all secondary teachers majoring in physical education. Deals with the rationale and the practice of secondary education, including curriculum and organization. Spring. Staff.

EDUC 100 Education Workshops (1-3). Workshops designed around education topics, primarily for certified K-12 teachers. Prerequisite, permission of the Director for Teacher Education. Summer. Members of the graduate faculty.

*Open only to majors in the School of Education or with permission of the Director of Teacher Education.

EDUC 153* Content-Area Reading and Writing (3). Introductory course that focuses on current theory, research, and issues in the teaching and use of reading and writing in the content area. Fall and spring. Cunningham, Palmer, Spiegel.

Courses for Graduates and Advanced Undergraduates

Undergraduate students who are not in the School of Education must get the permission of the dean to enroll in these courses.

Curriculum and Instruction

EDCI 111 Audiovisual Instruction: Techniques and Materials (3). Presents the techniques and methods for using the appropriate educational media and supporting resources in instructional situations. Fall and summer. Wileman.

EDCI 113 Introduction to Instructional Materials Production *(RTVMP 113)* (3). The planning and production of two and three dimensional instructional materials, such as television graphics, slides, overhead transparencies, manipulative tactile materials, and animated motion pictures. Fall and spring. Wileman.

EDCI 115 Principles of Instructional Design(3). The design and production of instructional materials incorporating goal analysis, learning task analysis, behavioral objectives, entry behavior, criterion tests, instructional strategies, design planning, and formative evaluation. Prerequisite, EDUC 72 or EDFO 100. Fall. Hannum.

EDCI 120 Early Childhood Education (3). Considers the development of early childhood education, growth and development characteristics of young children, and the organization and administration of programs and services for young children. Fall and summer. Brice, Day.

EDCI 121 The Curriculum of Early Childhood Education (3). Relates the objectives of early childhood education to curricula in language development, science, social living, numbers, music, art, and dramatic play. Spring and summer. Brice, Day.

EDCI 185 Elementary General Music Methods (3). Designed to provide students with knowledge of the structure, scope, and sequence of instruction in elementary general music. As demand warrants. Whitaker.

EDCI 186 Research in Music Education (3). Students will gain familiarity with important ideas and concepts concerning research and with the potential, limitations, and applications of research methodologies. Fall. Whitaker.

EDCI 187 Adavanced Choral Methods and Vocal Development (3). Seminar and workshop in pedagogical procedures in choral/vocal art and musical development. As demand warrants. Huff.

EDCI 188 The Teaching of Applied Music: Vocal *(MUSC 188)* (3). Physiological and acoustical analysis of the singing act; phonics and phonetics as applicable to singing English and foreign languages, and vocal exercises and techniques suitable for classroom and choral rehearsal. As demand warrants. Music Department Staff.

EDCI 189 Marching Band Procedures (3). Designed to provide students with knowledge of the organization, planning, and administration of a marching band program. Students will also acquire the skills of drill writing and show designing. As demand warrants. Music Department Staff.

EDCI 190 Middle Grades General Music Methods (3). Designed to provide students with knowledge of the structure, scope, and sequence of instruction in middle grades general music. As demand warrants. Whitaker.

EDCI 199 Independent Study in Curriculum and Instruction (1-3). May be repeated for a maximum of six credit hours . Readings and

* Open only to majors in the School of Education or with permission of the Director of Teacher Education.

research under the direction of a member of the program. Prerequisite, permission of the instructor. Fall and spring. Staff.

Education Foundations

EDFO 100 Psychological Foundations of Education (3). Describes the nature and relevance of educational psychology; sources and interpretation of educational and psychological data; components of teacher-learning situations, evaluation, and reporting. Summer. Staff.

EDFO 101 Psychology of Childhood and Adolescence (3). Theories of child and adolescent development plus research findings which aid in the understanding of human behavior and development. Fall and summer. Coop, Meece.

EDFO 103 Psychology of Adult Learning, Interaction of Values, Personality, and Cognition (3). Studies the interaction of personality, motivation, values, attitudes, and cognition of students from late adolescence through middle age. Fall. Frierson.

EDFO 106 Educational Measurement and Evaluation (3). Identifies the basic concepts in measurement and evaluation, describes the role of evaluation in curriculum construction and revision, and describes the development and use of teacher-constructed tests. Not a part of the doctoral research sequence. Fall and summer. Kanoy.

EDFO 120 Social Foundations of American Education (3). A study of the historical developments, philosophical theories, and social forces influencing American education. Fall, spring, and summer. Phillips, Unks.

EDFO 121 Seminar in Social Foundations of Education (1). Topics in the social and philosophical context of American public education. Fall. Staff.

EDFO 122 Seminar in Social Foundations of Education (1). Topics in the social and philosophical context of American public education. Spring. Staff.

EDFO 180 Statistical Analysis of Educational Data I (4). Descriptive and inferential statistics for educational research, including an introduction to fundamentals of research design and computer data analysis. Fall and summer. Fitzgerald, Ware, and White.

EDFO 190 Educational Applications of Micrcomputers (3). An introduction to educational applications of microcomputers, including introductory BASIC programming and an overview of CAI, CMI, word processing, soft-ware evaluation, and teacher utility programs. Prerequisite, permission of the instructor. As demand warrants. Stuck, Ware.

EDFO 199 Independent Study in Human Development and Psychological Services (1-3). May be repeated for a maximum of six credit hours. Reading and research under the direction of a member of the program whose interests coincide with those of the student. Prerequisite, permission of the instructor. Fall and spring. Staff.

Specialized Professional Education

EDSP 120 Introduction to School Psychology (3). A course designed to provide the student with an introduction to concepts and methods involved in school psychology. As demand warrants. Staff.

EDSP 130 Introduction to Exceptional Students (3). A comprehensive survey of giftedness and of various handicapping conditions: mental retardation, emotional disturbance, learning disabilities, speech impairment, deafness, blindness, orthopedic impairment, and neurological impairment. Fall, spring, and summer. Staff.

EDSP 132 The Gifted Child in School and Society (3). The nature of giftedness and creativity; characteristics of gifted and creative children; approaches to encouraging the development and utilization of their abilities. Spring and summer. Gallagher.

EDSP 135 Psychology of Mental Retardation (3). Study of the research related to the psychological and sociological aspects of educationally handicapping conditions and of the children who manifest those conditions. Fall and summer. Wiegerink.

EDSP 141 Methods of Teaching Speech to the Hearing-Impaired *(SPHS 203)* (3). Reviews general principles of speech development, underlying problems in speech acquisition by moderately to profoundly hearing-impaired individuals, deviant spoken language, and practical and theoretical aspects of evaluating and establishing speech. As demand warrants. Staff.

EDSP 143 Introduction to Communication Disorder *(SPHS 183)* (3). Explores the etiology, epidemiology, assessment, and educational implications of speech and language disorders. Fall, spring. and summer. Lubker.

EDSP 144 Foundations of Phonological and Voice Deviations *(SPHS 184)* (3). First semester of a two-course offering in evaluation, analysis and measurement (assessment), modification of behaviors, breakdown of process in speech disorders, with emphasis on voice and articulation disorders. Prerequisite, SPHS 130 or its equivalent. As demand warrants. Staff.

EDSP 145 Phonetics (3). The recognition, analysis, production, and transcription of the sounds of the English language using the international phonetic alphabet. As demand warrants. Staff.

EDSP 179 Management of Learning Environments (3). Emphasis on affective behavior management and applied behavior analysis techniques for intervening in the environments of exceptional children to increase learning. Fall. Staff.

EDSP 199 Independent Study in Educational Leadership (1-3). May be repeated for a maximum of six credit hours. Prerequisite, permission of the instructor. Readings and research under the direction of a program faculty member. Fall, spring, and summer. Staff

School of Information and Library Science

Barbara B. Moran, *Dean*

Although the School of Information and Library Science does not have an undergraduate program, one course is offered for undergraduates and the other courses listed below are available to advanced undergraduates (juniors and seniors). For specific information about the graduate program requirements, consult the separate catalog of the School of Information and Library Science. Administrative and faculty offices of the School are located in Manning Hall.

NOTE: The prefix for all School of Information and Library Science courses is INLS.

When a co- or prerequisite is listed for a course, it may be assumed that an equivalent course taken elsewhere or permission of instructor also fulfills the prerequisite or corequisite. The course instructor must approve the equivalency of the substitute course.

Course for Undergraduate Students

92 Survey and Evaluation of Materials for Children (3). A survey of book and nonbook materials for children in grades K - 6, designed for prospective teachers enrolled in the program in Early Childhood Education. Steinfirst, Kingsbury.

Courses for Graduates and Advanced Undergraduates

101 Foundations: Philosophy and Theory of Information (3). Introduction to information and the information profession; the study of how information is transmitted, acquired, organized, retrieved, managed, and used. Staff.

102 Introduction to Computing for Information Use (3). Study of the functional capabilities of major classes of microcomputer application software, the computing needs of information agencies, and selected current topics in computing. Losee, Wildemuth.

108 History of Books and Libraries (3). The history of human communication focusing on the origin and development of the book and the origin and development of libraries and librarianship. Holley, Steinfirst.

110 Selected Topics (3). Members of the faculty. Courses offered during 1991-92 include:

110 (15) Literature for the Middle School Student. Steinfirst.

110(47) Natural Language Processing for Information Services. Haas.

Management Information Systems. Solomon

110(48) Library Automation. Staff.

111 Information Resources and Services I (3). Analysis, use and evaluation of information and reference systems, services and tools with attention to both printed and electronic modes of delivery. Provides a foundation in search techniques for electronic information retrieval, question negotiation, and interviewing. Tibbo.

115 Natural Language Processing *(Computer Science 171)* (3). Prerequisite, Computer Science 14 or 15. Statistical, syntactic, and semantic models of natural language. Tools and techniques needed to implement language analysis and generation processes on the computer. Haas.

120 History of Children's Literature (3). A survey of children's literature in English from the Middle Ages through the nineteenth century. Steinfirst.

122 Young Adult Literature and Related Materials (3). A survey of print and nonprint library materials particularly suited to the needs of adolescents. Steinfirst.

123 Children's Literature and Related Materials (3). Survey of literature and related materials for children with emphasis on 20th-century authors and illustrators. Kingsbury.

131 Management of Information Agencies (3). An introduction to management in libraries and other information agencies. Topics to be studied include planning, budgeting, organizational theory, information sources for managers, staffing, leadership, organizational change, and decision making. Moran, Chatman.

151 Organization of Materials I (3). An introduction to the problems of organizing information and collections of material. Formal systems for cataloging and classifying are studied. Saye.

158 Information Resources and Services II (3). Prerequisite, INLS 111. Continues the analysis, use and evaluation of information and reference systems, services and goals begun in INLS 111 with a focus on bibliographic databases. In-depth investigation of topics in electronic information retrieval with emphasis on effective information retrieval techniques, end-users instruction in these techniques and the management of electronic information services. Tibbo.

162 Systems Analysis (3). Introduction to the systems approach to the design and development of information systems. Methods and tools for the analysis and modeling of system functionality (e.g. structured analysis) and data represented in the system (e.g. object oriented analysis) are studied. Haas, Solomon, Wildemuth.

165 Records Management (3). Introduces the principles of records center design, records analysis and appraisal, filing systems, reprographics and forms, reports, and correspondence management. Legal issues and the security of records are also covered. Saye.

170 Applications of Natural Language Processing *(Computer Science 170)* (3). Prerequisite, Comp 14 or 15 or graduate standing in Information and Library Science. Study of applications of natural language processing techniques and the representations and processes needed to support them. Topics include interfaces, text retrieval, machine translation, speech processing, and text generation. Spring. Haas.

172 Information Retrieval *(Computer Science 172)* (3). Prerequisite, INLS 102, or Computer Science 14 or 15. Study of information retrieval and question answering techniques, including document classification, retrieval and evaluation techniques, handling of large data collections, and the use of feedback. Shaw, Losee.

174 Telecommunications Systems (3). Prerequisite, INLS 102. Digital and analog forms of electronic communication. Design and performance of networks and their relationship to libraries and information agencies. Losee.

176 Information Models (3). An introduction to information science surveying its various representations and information flows and examining major analytical techniques used in the field. Losee, Haas.

The School of Journalism and Mass Communication

Richard R. Cole, Ph.D., *Dean*

The School of Journalism and Mass Communication was founded as the Department of Journalism in 1924 and became the School of Journalism in 1950. Forty years later, it assumed its present title.

The School offers a course of study leading to the Bachelor of Arts in Journalism and Mass Communication. Students may begin taking courses as sophomores and concentrate their studies in the junior and senior years.

For nearly 70 years, the School has built an impressive record of service. Through excellent teaching, research, and public service, through its students, faculty, alumni, and friends, the School has been a force in journalism-mass communication education and the mass media of North Carolina and beyond. It is the only school of journalism - mass communication in North Carolina.

Today the 5,000 alumni of the School are active in virtually every aspect of journalism and mass communication. Many are trendsetting newspaper executives. Others hold high positions with international news agencies, magazines, broadcasting companies, and advertising agencies; in public relations, business journalism, and photojournalism; and in research, government, education, and industry.

The School has an excellent reputation, and relations with the mass media are first-rate. The primary role of the School has been and continues to be the education of young people for professional careers in the mass media of North Carolina, and especially in newspapers of the state. Over the years, this has fostered close, harmonious relations with the state press.

The other mass media play an important role in the School also, and students from across the United States and from other countries come to Chapel Hill to study journalism and mass communication.

Fully Accredited

The School has been nationally accredited since 1958. In 1978, the School received the first unit-wide accreditation in the country granted by the official accrediting agency, the Accrediting Council on Education in Journalism and Mass Communications. When the School was last accredited in 1991, the national team stated that the School is one of the best in the country. The School is also active in the Association of Schools of Journalism and Mass Communication.

Scholarships, Placement

Several special scholarships are available to journalism-mass communication majors and to students transferring into the School. For information, write the Associate Dean of the School by December 1 for the following academic year.

The School operates its own Placement Service and constantly seeks to fit the right graduating senior - or journalist or someone else in mass communication with years of experience - with the right job. In addition, the School works closely with the mass media throughout North Carolina and in other states on internship programs. All students are strongly encouraged to obtain internships in news-editorial journalism, advertising, photojournalism, graphic design, public relations, broadcast journalism, business, or other areas.

Student Activities

Students are urged to work on *The Daily Tar Heel*, the student newspaper at UNC-Chapel Hill, or on the student newspaper of the institution they attend for their first two years of college. Experience on other media is encouraged throughout the student's years on campus. Publications include *Black Ink* and *The Phoenix*. The *UNC Journalist* and *JAFA News*, laboratory publications of the School, serve as an excellent print outlet.

Students are also encouraged to join appropriate organizations in journalism and mass communication, including campus chapters of the Society of Professional Journalists, American Advertising Federation, International Association of Business Communicators, Public Relations Student Society of America, Society of Newspaper Design, Carolina Association of Black Journalists (affiliated with the National Association of Black Journalists), Radio-Television News Directors Association of the Carolinas, and National Press Photographers Association. Membership for men and women is also available in the N.C. Triangle professional chapter of Women in Communication, Inc.

Undergraduate Program

The School prepares men and women for careers in journalism and mass communication by offering an academic program that provides a basic liberal arts education, an understanding of the responsibilities of a free press in a democratic society, and a fundamental knowledge of journalistic and mass communication techniques and substance.

The philosophy that guides the School is that journalists and communicators must understand the political, social, economic, and cultural forces that operate within society. For this reason, students acquire a background in the humanities, social sciences, and natural sciences while preparing themselves for journalism-mass communication careers. About one-fourth of the credit hours earned toward the Bachelor of Arts in Journalism and Mass Communication are in journalism-mass communication (JOMC) courses. The balance of each student's program is expected to provide the broad education necessary for those who plan careers in mass communication.

The School recognizes its responsibility to the state of North Carolina to prepare men and women for positions on newspapers and other media in the state. Its undergraduate program, therefore, includes technique courses in sufficient number to provide its graduates with entry-level skills for reporting, editing, advertising, photojournalism, graphic design, public relations, and other positions on daily and nondaily newspapers, magazines, broadcast stations, and other media.

Admissions

The School is one of the undergraduate units of the University. Others are the General College, the College of Arts and Sciences, the School of Business Administration, and the School of Education. Students are enrolled in the General College during their first two years, after which they may transfer to the School or one of the other units. (Students may take JOMC courses in the sophomore year.) School faculty members serve as General College advisers to help freshmen and sophomores select appropriate courses.

Undergraduate admissions to UNC-Chapel Hill are handled by the University's Undergraduate Admissions Office, and requests for information and application forms should be sent to that office. The Undergraduate Admissions Office will also advise students on the proper freshman and sophomore courses to take in preparation for junior-year transfer to Chapel Hill from other campuses.

Students are admitted to the School when they attain junior standing and have completed the requirements of the General College on the Chapel Hill campus or have earned grades of C or better in equivalent courses at other recognized institutions.

To qualify for admission from the General College or from another UNC-Chapel Hill department or school, students who entered the University as freshmen in fall 1988 and thereafter must have earned an overall quality-point average of 2.4 or better in all course work.

Because the University limits the number of transfer students from other institutions, applicants compete for admission to the School on the basis of quality-point averages and other academic credentials, and on such matters as commitment to a career in journalism or mass communication and letters of recommendation. The final decision on admitting transfer students rests with the Office of Undergraduate Admissions.

All students must pass the School's spelling and grammar examination before enrolling in JOMC 53 or JOMC 171. The examination will be given a number of times each year. Off-campus transfer students will take the examination during orientation.

Pre-Transfer Advising

Students are urged to visit the School in the freshman or sophomore year to meet with faculty members and plan a sound foundation for their professional program. Pre-journalism-mass communication students are also invited to participate in activities of the School.

Students may take JOMC 53 in the first semester of their sophomore year - provided they have passed the School's spelling and grammar examination. As sophomores, students may also take JOMC 54 (if they have completed JOMC 53), 56, 57, 58, 80, 85, 101, 120, 130, 140, 141, 146, 160, 164, 170 and other courses. Students in the advertising sequence should take JOMC 170 in their sophomore year or as soon as possible in their junior year.

Special Requirements

Because students must use computers to complete assignments - often under deadline conditions - they must have good keyboard skills at the time of admission to the School. It is useful, although not essential, that students be familiar with word-processing software.

Students are expected to have a solid foundation in spelling, grammar, punctuation, and other writing skills before they enter the School. In line with these expectations, the School requires that students earn a minimum passing score on a spelling and grammar examination before they take JOMC 53, "Newswriting," or JOMC 171, "Advertising Copywriting." Further, students must earn a higher score on the spelling and grammar examination as a condition for graduation. The examination is administered several times a semester and during the summer. Spelling and grammar scores become part of the students' records.

Internship Programs

Although the School awards no academic credit for internships, all students are strongly encouraged to obtain internships - primarily in the summer - because they provide invaluable professional experience. News-editorial, advertising, photojournalism, graphic design, broadcast news, public relations, business, and other internships are possible. Many newspapers in North Carolina and other states send editors or other executives to the School to interview students for internships.

The practicum course (JOMC 55) offers students an opportunity to do supervised professional work during a regular semester for 3 hours of credit. The School gives no credit for full-time summer internships; students should receive salaries for such work.

When Special Studies 91P or other courses are an internship, it does not count toward a major in journalism-mass communication. Prior permission is required from the School for other special studies courses.

Honors Program

An honors program is available to students who have demonstrated their ability to perform distinguished work. Admission to the honors courses (98 and 99) is based upon an average of 3.5 or better in the major and overall, recommendation by a faculty member in the School, and approval by the director of the honors program. Students successfully completing the program are graduated "with honors" or "with highest honors." Honors students must take more than the minimum of 27 required credits in journalism-mass communication.

Degree Requirements

Sequences and Double Majors

A sequence in the School is a concentration in news-editorial journalism, broadcast journalism, visual communication, public relations or advertising. (The visual communication sequence has options for photojournalism or graphics.) Each sequence has some courses that are required specifically. Some courses are required for all majors in the School.

Students gain no particular advantage in concentrating in more than one sequence, and they may change to another sequence as long as the requirements can be met without exceeding the maximum credit hours in JOMC courses.

A student may double major by meeting all requirements for the major in the School and in virtually any field in Arts and Sciences. (A student interested in broadcast journalism should be in the broadcast journalism sequence instead of being a double major in journalism-mass communication and RTVMP.) The degree earned is a B.A. in Journalism and Mass Communication. The records of any major or double major must be in the School of Journalism and Mass Communication. Double majors are noted on the transcript but not on the diploma. Sequences are not noted on the transcript or diploma.

UNC-Chapel Hill Degree Requirements

Undergraduates must meet the following general requirements for graduation:

A distribution of courses during the first two years that meets General College requirements.

The perspective courses required at both the freshman-sophomore and junior-senior levels. (JOMC majors may take the junior-senior perspective courses Pass-D-Fail if they wish.)

A minimum of 120 credits (not including physical education activity courses) with a quality point average of 2.0.

Journalism-Mass Communication Requirements in All Sequences

Students must complete a minimum of 27 credits in journalism-mass communication with a quality-point average of 2.0 or better. A grade of D in a journalism-mass communication course required in a sequence will not be

counted in the minimum number of journalism-mass communication credits required for graduation.

Of the basic 120 hours for graduation, at least 90 hours must be outside journalism-mass communication and the skills courses in RTVMP, if any are taken. Within these 90 hours, at least 65 must be in Arts and Sciences. Beyond the basic 120 hours for graduation (not counting the 1-hour P.E. activity courses), students may take as many School courses as they like. The minimum number of School credits required is 27, and students are strongly encouraged to take more. (Honors students must take more than 27.) Please note: JOMC 55 may not be counted in the minimum of 27 credit hours required in journalism-mass communication for graduation; it must be beyond that.

A passing score on the School's spelling-and-grammar examination.

News-Editorial Sequence Requirements
Four courses are required:

JOMC 53 (4 credits), Newswriting
JOMC 54 (3), Reporting
JOMC 57 (3), News Editing
JOMC 164 (3), Introduction to Mass Media Law and Ethics

In addition, students must take at least two courses (including at least one course at the 100- level) from among the following craft courses: 56, 58, 80, 85, 154, 156, 157, 180, 181, 185, 186, 191 (when it is a craft course). In addition, students must take at least two courses from among the following conceptual courses: 101, 140, 141, 144, 146, 160, 165; 120, 130, 170, 191 (when it is a conceptual course). At least one must be selected from the first six courses.

Students in the news-editorial sequence must fulfill certain requirements in courses outside the School. They must take a supporting program of at least 3 credits in each of the following areas:

State and Local Government
U.S. Government and Politics
Recent U.S. History
Sociology
Psychology
Economics

Students must also take an outside concentration or minor of at least 9 credits (beyond General College requirements) in a single subject matter area, including, but not limited to: economics, political science, history, sociology, psychology, English, RTVMP, any natural or social science or foreign language, any fine arts area, computer science, business administration, or other discipline.

Broadcast Journalism Sequence Requirements
Students in the broadcast journalism sequence must take the following required courses:

JOMC 53 (4), Newswriting
JOMC 54 (3), Reporting
JOMC 57 (3), News Editing
JOMC 164 (3), Introduction to Mass Media Law and Ethics
JOMC/RTVM 73 (3), Introduction to Broadcast Journalism (counts as JOMC)

Students in the broadcast journalism sequence must take the same supporting program and outside-concentration requirements as in the news-editorial sequence, as well as at least two courses from among these courses: 101, 140, 141, 144, 146, 160, 165; 120, 130, 170, 191 (when it is a conceptual course). At least one must be selected from the first six courses. JOMC/RTVM 174 (Advanced Broadcast News Reporting), would be highly desirable as an elective.

Visual Communication Sequence Requirements
Students in the visual communication sequence must take the following five core courses:

JOMC 53 (4), Newswriting
JOMC 54 (3), Reporting or
JOMC 57 (3), News Editing
JOMC 80 (3), Beginning Photojournalism
JOMC 85 (3), The World of Graphic Design
JOMC 164 (3), Introduction to Mass Media Law and Ethics

In addition, students must take at least one course selected from the following: 101, 140, 141, 144, 146, 160, 165.

Students in the visual communication sequence must take the same supporting program and outside concentration requirements as in the news-editorial sequence.

Graphics Option
Students wanting a career path in graphics must take the following courses in addition to the above:

JOMC 185 (3), Publication Design and Information Graphics
JOMC 186 (3), Specialized Studies in Graphic Design

Photojournalism Option
Students wanting a career path in photojournalism must take the following courses in addition to the above:

JOMC 180 (3), Advanced Photojournalism
JOMC 181 (3), Documentary Photojournalism

Public Relations Sequence Requirements
Students in the public relations sequence must take the following required courses:

JOMC 53 (4), Newswriting
JOMC 54 (3), Reporting
JOMC 57 (3), News Editing
JOMC 130 (3), Principles of Public Relations
JOMC 131 (3), Case Studies in Public Relations
JOMC 164 (3), Introduction to Mass Media Law and Ethics

In addition, students must take at least one of the following courses: 54, 56, 58, 73, 80, 85, 132, 154, 156, 157, 180, 181, 185, 186, and 191 (when it is a craft course). In addition, students must take at least one of the following courses: 101, 140, 141, 144, 146, 160 and 165. JOMC 170 is highly desirable as an elective.

Students in the public relations sequence must meet the same supporting program and outside-concentration requirements as in the news-editorial sequence. In addition, they should select courses outside the School in consultation with their advisers, to fulfill the recommendations of the Commission of Public Relations Education of the Association for Education in Journalism and Mass Communication, the Public Relations Society of America, the International Association of Business Communicators, and the Foundation for Public Relations Research and Education.

Advertising Sequence Requirements

Three courses are required:

JOMC 53 (4), Newswriting
JOMC 164 (3), Introduction to Mass Media Law and Ethics
JOMC 170 (3), Principles of Advertising

In addition, students must also take at least four of the following courses: 171, 172, 173, 175, 176, 178, 179 and 191 (when the topic is advertising). Also, at least one course must be taken from the following courses: 101, 140, 141, 144, 146, 160 and 165.

Business Administration 160 is not required, but all students who plan careers in advertising should take it. It is highly recommended.

Students must also fulfill certain requirements in courses outside the School. They must take a supporting program of at least 3 credits in each of the following areas:

Recent U.S. History
Economics
Psychology
Sociology

Advertising students must also take an outside concentration or minor of at least 9 credits (beyond General College requirements) in a single subject area, including, but not limited to: economics, political science, history, sociology, psychology, English, RTVMP, any natural or social science or foreign language, any fine arts area, computer science, business administration, or other discipline.

Technical Writing Minor

The School offers a minor in technical writing to non-JOMC students that is intended to supplement the knowledge they gain in their major subject area. It is designed to meet the needs of students who wish to prepare for employment opportunities in technical writing. Technical writers are often responsible for taking information compiled by scientists, engineers and managers and putting it into readable documents intended for a range of audiences. Examples of technical writing assignments might include preparing research reports for a pharmaceutical company or user manuals for a computer company.

Admission to the technical writing minor is by application, and forms are available in the School of Journalism and Mass Communication (100 Howell Hall) and the Department of English (208 Greenlaw).

Four specified courses and one elective are required for the minor:

Required courses:

JOMC 53 News Writing
JOMC 57 News Editing*
JOMC 85 The World of Graphic Design
ENGL 33 Scientific Writing

* This will be a special section of News Editing that will focus on technical editing.

One elective course chosen from:
BIOL 8 Biology and Man
BIOL 10 Plants and Life
BIOL 11 Principles of Biology
BUSI 150 Organizational Behavior
CHEM 11 General Descriptive Chemistry I
COMP 14 Introduction to Programming
ENVR 51 Environmental Protection
PHYS 20 Basic Concepts of Physics
PHYS 21 Frontiers of Physics
PHYS 37 Science and Society
PHYS 38 Energy
PHYS 39 Science and the Arts

Students must satisfy the prerequisite for JOMC 53: a score of at least 60 percent on the School's spelling and grammar examination. That examination is given on several occasions listed on a schedule posted in the School office in 100 Howell.

An internship experience is a vital part of the technical writing minor, and internship opportunities with firms in the Research Triangle area can be sought through the placement service of the School of Journalism and Mass Communication, 109 Howell Hall. Students should not seek an internship, however, until they have completed JOMC 53 and ENGL 33.

Graduate Studies

The School also offers a major in journalism-mass communication leading to the M.A. degree in the Graduate School. In addition, the School is the administrative center for the Ph.D. degree in Mass Communication Research. JOMC graduate courses may be used as minor or supplementary courses for the M.A. and Ph.D. in other fields. For further information on the undergraduate or graduate program, write to the Dean of the School of Journalism and Mass Communication for the separate journalism bulletin.

School of Journalism and Mass Communication Curriculum

Some Journalism-Mass Communication courses require permission of the instructor or the School. Students should check in the School office for current requirements.

Courses for Undergraduates

53 News Writing (4). Prerequisites, sophomore standing; passing grade on the School's spelling and grammar examination; ability to type; permission of School. Study of elements of news stories, writing of leads, organization and writing of various types of news stories. Staff.

54 Reporting (3). Prerequisite, JOMC 53. Exercise in news gathering, interviews, and writing news for print media. Staff.

55 Mass Communication Practicum (3). Prerequisites, JOMC 53; JOMC 54; permission of instructor. Students work with area media and advertising and public relations firms and meet weekly for consultation and evaluation by the faculty adviser. May be taken Pass-Fail only. Shumaker.

56 Feature Writing (3). Prerequisite, JOMC 53. Instruction and practice in writing feature articles for newspapers and magazines. Staff.

57 News Editing (3). Prerequisite, JOMC 53. Study and practice in copyreading, headline writing, proofreading; with attention given to printing terminology, page makeup, type structure, computer use in editing, and analysis of newspapers. Staff.

58 Editorial Writing (3). Prerequisite, JOMC 53. Practice in writing editorials for daily and nondaily newspapers. Shumaker.

68 The Black Press *(Afro-American Studies 68)* (3). Prerequisite, English 2. A survey of black press in the United States since 1827. Special focus on key figures who have helped to institutionalize the black press and on key issues addressed during critical periods in black history. Amana.

73 Broadcast Journalism *(Radio, Television, and Motion Pictures 73)* (3). Prerequisite, JOMC 53. Analysis of broadcast journalism; theory and practice in communicating news in oral and visual modes. Bittner, staff.

80 Beginning Photojournalism (3). Students photograph general news events, sports, features and other standard newspaper subjects while learning the basic visual and technical aspects of photojournalism. Beckman, staff.

85 The World of Graphic Design (3). Principles and practices of design, typography, graphics and production for visual communication for print and electronic media. Computer graphics and pagination. Anthony.

97 Individual Study (3). Permission of instructor. An individual readings and problems course to be directed by a faculty member in whose field of interest the subject matter lies. Staff.

98 Introductory Honors Course (3). Permission of instructor. Required of all students reading for honors in journalism. Blanchard, Packer.

99 Honors Essay Course (3). Permission of instructor. Required of all students reading for honors in journalism. Blanchard, Packer.

Courses for Graduates and Advanced Undergraduates

101 The Mass Media and U.S. History (3). An examination of the development of the mass media in the context of U.S. history. Emphasis is on major developments and trends within a chronological framework. Shaw, Blanchard.

102 Journalism Education in High School (3). Prerequisite, graduate standing. Readings, discussion, projects fostering excellence in teaching journalism-mass communication in the high school, from philosophy and practice to professional skills. Staff.

120 Community Journalism (3). Prerequisite, JOMC 53. Detailed study of the community press in North Carolina, including policies, procedures, and problems of the entire operation of community newspapers. Staff.

130 Principles of Public Relations (3). Prerequisite, JOMC 53. Internal and external public relations concepts and practices for businesses and other organizations, with emphasis on identification and analysis of their publics and design, execution and assessment of appropriate communication as strategies. Reuss, Straughan.

131 Case Studies in Public Relations (3). Prerequisite, JOMC 130. Analysis of public relations practices, including planning, communication, evaluation exercises; management responsibilities. Reuss, Straughan.

132 Public Relations Writing (3). Prerequisites, JOMC 53 and 130. Education and practice in communication skills required of public relations practitioners. Straughan, staff.

140 Current Issues in Mass Communication (3). Analysis of the interrelationships between United States mass media and the society that they serve. Brown, Walden.

141 Professional Problems and Ethics (3). Intensive study of professional and ethical issues and problems facing the mass media and their employees in relation to modern society. Meyer, staff.

144 Censorship (3). Its history, conflicting philosophies and practice through politics, government, ethnicity, religion, pressure groups, the media and the law with emphasis on events and personalities. Stone.

146 International Communication and Comparative Journalism *(Political Science 146) (Radio, Television, and Motion Pictures 146)* (3). Development of international communication; the flow of news and international propaganda; the role of communication in international relations; communication in the developing nations; comparison of press systems. Stevenson.

154 Advanced Reporting (3). Prerequisites, JOMC 53 and 54. Rigorous, in-depth instruction and critiques of students' news and feature assignments done with different reporting methodologies: interviewing, official records, direct and participant observation, and survey research (the Carolina Poll). Meyer, staff.

156 Magazine Writing and Editing (3). Prerequisites, JOMC 53 and 57. Instruction and practice in planning, writing, and editing copy for magazines. Reuss.

157 Advanced Editing (3). Prerequisite, JOMC 57. Concentration on the editing and display of complex news and features stories and other print media content with a significant emphasis on newspaper design and graphics. Cloud.

160 Freedom of Expression in the United States (3). An examination of the development of freedom of expression in the United States within the context of the nation's history. Blanchard.

164 Introduction to Mass Communication Law and Ethics (3). Introduction to press freedom and the First Amendment, including libel, privacy, access to information, free press-fair trial, advertising and broadcast regulation, journalistic privilege, prior restraint. Bittner, Walden, Packer.

165 Process and Effects of Mass Communication (3). Mass communication as a social process, incorporating literature from journalism, social psychology, sociology, political science, history. To acquaint students with factors in message construction, dissemination and reception by audiences. Shaw, Brown.

170 Principles of Advertising (3). A survey of the economics, psychology, philosophy, and history of advertising, with particular reference to research bases, copy, layout, media planning, production, and testing of advertisements. Bowers, Shaver, Sweeney.

171 Advertising Copy and Communication (3). Prerequisites, JOMC 53, JOMC 170 or equivalent; passage of School's spelling and grammar examination; permission of the School. Application of findings from social science research; social responsibility of the copywriter and advertiser; preparation of advertisements for the mass media; research in copy testing. Biocca, Sweeney.

172 Advertising Media (3). Prerequisites, JOMC 53, JOMC 170 or equivalent. The media- planning function in advertising for both buyers and sellers of media; the relationships among media, messages, and audiences; computer analysis. Bowers, Zhao.

173 Advertising Campaigns (3). Prerequisites, JOMC 53, JOMC 171 or 172. Planning and executing advertising campaigns; types and methods of advertising research; the economic function of advertising in society. Lauterborn.

174 Advanced Broadcast News Reporting *(Radio, Television, and Motion Pictures 174)* (3). Prerequisite, RTVMP 73. Examination and application of in-depth broadcast news reporting techniques, especially investigative reporting, special events coverage, and the documentary. Students film and produce radio and television programs of actual news events.

175 Concepts of Marketing (3). Prerequisite, junior status. Designed for students anticipating careers in advertising, public relations, or related areas, this course teaches the vocabulary and basic concepts of marketing as it will be practiced, emphasizing the role of mass communication. Lauterborn.

176 Advanced Advertising Copywriting (3). Prerequisites, JOMC 53, JOMC 170 or equivalent, JOMC 171. Rigorous, in-depth instruction and critiques of student advertising writing. Sweeney.

178 Retail Advertising (3). Prerequisites, JOMC 53, JOMC 170 or equivalent. Principles and practices of retail advertising in all media, with emphasis on selling, writing and layout of retail advertising for the print media. Bowers, Shaver.

179 Advertising Research (3). Prerequisites, JOMC 53, JOMC 170 or equivalent. Detailed study and application of advertising research methods, including focus groups, copy testing, audience research, and evaluation. Biocca, Bowers, Zhao.

180 Advanced Photojournalism (3). Prerequisite, JOMC 80, JOMC 53 (concurrently). Advanced course in photojournalism concentrating on the newspaper and magazine picture story, advanced camera and darkroom techniques, and picture editing. Beckman.

181 Documentary Photojournalism (3). Prerequisite, JOMC 180. Students will study and produce work on the social documentary tradition of photojournalism. Beckman.

185 Publication Design and Information Graphics (3). Prerequisites, JOMC 85, JOMC 53 (concurrently). Detailed study and application of graphic design techniques in advertising, corporate communication, magazines, newspapers and information graphics. Conceive and execute numerous finished layouts, and graphics. Anthony.

186 Specialized Studies in Graphic Design (3). Prerequisite, JOMC 185. Intensive readings, discussion and practice in graphic design. Student selects concentration from advertising, corporate communication, magazine or newspaper design, or information graphics. Produces finished works for competitions or publication. Anthony.

191 Proseminar in Contemporary Mass Communication (1 - 3). Small classes on various aspects of journalism-mass communication with subjects and instructors varying each semester. Staff.

Summer School

James L. Murphy, Ph.D., *Dean*

The University of North Carolina at Chapel Hill established what was possibly the first summer school in America in 1877. Then called the "Summer Normal School," it operated for eighteen of the next thirty years. Since 1907 this university has continued annually to provide a wide offering of summer academic opportunities to the people of North Carolina and other residents in this country and abroad. From 1934 to 1987 these programs were administered by the Office of Summer Sessions. The traditional name of Summer School was reinstated in 1988.

The College of Arts and Sciences as well as many of the professional schools offer summer courses for both undergraduates and graduates. The same faculty which makes this university one of the nation's best teach these courses, assisted by visiting professors who are specially recruited by certain departments for this purpose.

The Summer School Dean and staff coordinate the course offerings and the contracting of the summer faculty with the assistance of faculty liaisons and administrative assistants in each academic unit represented. The Summer School is responsible for the advertising, publications, budgeting, student services, and administration of the summer program and the application, admission, and registration of all visiting summer students.

Mission and Goals

Summer School is central to the teaching mission of the University. The summer term is one of the three terms during which the campus is open for formal instruction. Summer courses are of comparable quality and provide the same credit as corresponding courses in the fall or spring term.

When students have problems in the fall/spring terms getting courses they need or have to make choices between courses, summer provides a time when the course can be taken. This relieves pressure on the academic year, creates opportunities for enhancement of students' programs and increases student access to courses in nonmajor fields and other schools.

Because some subjects are best learned in an intensive and concentrated way, summer provides a time when students can focus on a single field. This is particularly useful for some laboratory experiences, concentrated arts courses, and foreign languages. Some curricula require field study or research projects and summer uniquely allows time for these studies.

The summer program is also one of the key ways the campus reaches out to those, especially public school teachers, who can benefit from what the University has to offer. Finally, summer is a time for faculty members to develop and experiment with new courses and teaching models which later can be offered during the academic year as well.

During the summer both faculty and students can concentrate on one or two courses without interruptions of other administrative, academic, and social events which exist during the year. The total number of students is fewer in the summer and the mix includes a higher proportion of nontraditional, visiting, or minority students than during the academic year. Since class sizes are smaller and classes meet daily, students experience more interaction with faculty and each other.

Academic Programs

The Summer School has two sessions of five and one-half weeks each and a special session that includes short courses, institutes, workshops, etc., with various beginning and ending dates. In recent years, about 900 different sections of courses have been offered each summer to about 6,500 students in the first session and 5,200 in the second. The available courses include many which satisfy the General College or Arts and Sciences general education perspective requirements. Twelve semester hours of credit would typically be earned by a full-time summer student over both summer sessions. Many students take fewer hours or attend only one session. The total credit hours earned by students in the summer term approaches 55,000.

In recent summers, enrolled students have come from all 100 counties in North Carolina, all fifty States, plus the District of Columbia, Puerto Rico, the Virgin Islands, and over 50 foreign countries.

Special Programs

The special sessions provide an opportunity for faculty and students to share a learning experience which is not otherwise possible. Offerings include about 35 courses with various beginning and ending dates. Some field courses and Law School courses are extended beyond the usual first session length. Courses taught especially for public school teachers begin after mid-June when the public schools end their term. Other institutes and workshops offered for credit operate on a concentrated schedule including foreign language institutions. Some courses are only offered in the special sessions and not offered during the fall or spring term.

The Summer School Abroad program also is available during the summer as an opportunity for study abroad in regular UNC-Chapel Hill courses taught by regular UNC-Chapel Hill faculty who accompany the students. Thus, the registration and credit is standard although the courses have considerably higher fees to cover various components of the foreign experience. Typical total costs for 3-4 week programs offering six credit hours is $2,500 - $3,500. Contact the Summer School for information on the expected Summer School Abroad program. Registration begins in October and runs through spring break for the restricted spaces in the study abroad programs.

Course sizes vary from ten to sixty, and locations from England to Greece. Faculty who offer such courses like to teach, enjoy association with students, and have some personal motivation to travel (usually a research oriented need to be on location), to study, and to make professional contacts.

Student Services

The Summer School coordinates and distributes information on the summer course offerings for credit in all units of Academic Affairs. Tentative schedules are available for perusal in the Summer School about mid-December. A complete Summer School catalog and Directory of Classes is published in March. Regular UNC-Chapel Hill students who need information on summer courses and preregistration should usually contact their advisers, Dean, or the relevant academic department. These students, however, and all others, are welcome to make inquiries at the Summer School, which acts as the information center for regular credit courses to be offered by the division of academic affairs during the summer term.

A potential visiting student can obtain information, catalog, and application from the **Summer School, CB#3340, 200 Pettigrew Hall, Phone: 966-4364**. The Summer School admits, advises, and registers visiting students. The Dean of the Summer School acts as the Dean for these students to approve any schedule adjustments and to represent their interests in other academic and administrative matters.

Summer School students have available for their use the usual campus facilities enjoyed by students in the fall and spring semesters, such as the libraries, computer labs, and athletic facilities. Information on university housing in residence halls and on dining plans is available in March. The Carolina Union, Carolina Intramural coed recreational sports, and *The Summer Tar Heel* function regularly during the summer to provide various events and information.

Division of Health Affairs

School of Dentistry

John W. Stamm, D.D.S., D.D.P.H., M.S.D., *Dean*

D.D.S. and Advanced Education Programs - The School of Dentistry offers a program leading to a Doctor of Dental Surgery degree. In addition, several postdoctoral programs leading to a certificate or Masters degree are offered. For additional information, contact **Admissions Office, School of Dentistry, The University of North Carolina at Chapel Hill, CB# 7450, Chapel Hill, N.C. 27599-7450.**

Allied Dental Education Programs - The School of Dentistry offers courses of study leading to a baccalaureate degree or certificate in Dental Hygiene. The School also offers a unique program for the training of teachers for dental auxiliary programs. The Dental Auxiliary Teacher Education program is offered through a master's course of study which prepares dental hygienists and dental assistants for teaching careers. Basic requirements for the dental hygiene program follow. A noncollege level certificate program in dental assisting also is offered. Additional information can be obtained from the School of Dentistry catalog and from the director of Allied Dental Education Programs.

The Curriculum for Dental Hygiene

Joyce W. Jenzano, B.S., M.S., *Director of Allied Dental Education Programs*

Bachelor of Science in Dental Hygiene

The School of Dentistry offers a program of study leading to the Bachelor of Science degree in Dental Hygiene. Courses of study provide comprehensive educational experiences to qualify individuals for the practice of dental hygiene in accordance with the current and changing demands for health services, and in accordance with the laws and ethics pertaining to practice. This curriculum is administered with the flexibility necessary to accommodate the varying special interests and career goals of individual students. Upon satisfactory completion of the required program of study, the student is eligible for licensure examination at state and national levels. Graduates are eligible for admission to graduate programs in Dental Hygiene Education, Public Health, and other allied areas.

Students may be admitted for dental hygiene study after two years of college work, provided they meet requirements of the University and the Curriculum for Dental Hygiene. Personal interviews are required. To assure proper planning for admission, students should maintain close contact with the program director.

Dental hygiene certificate and associate degree graduates from other accredited institutions may qualify for admission as postcertificate degree candidates, provided they meet the entrance requirements of the University and the Curriculum for Dental Hygiene. Acceptable scores on the National Board Dental Hygiene Examination must be presented to receive credit for professional courses. Personal interviews are required.

Enrollment is limited and students are accepted on a competitive basis. Freshman admission to the University does not guarantee admission into the dental hygiene curriculum. Selections are based on scholastic standing, character, personal fitness, and sincere interest in dental hygiene as a professional career. Residents of North Carolina receive preferential consideration for admission.

Prior to being admitted and enrolled, all students will be required to present evidence of satisfactory completion of the predental hygiene courses prescribed herein. The schedule of academic work includes: ***Preadmission Requirements:*** English 11, 12; Mathematics 10 plus one additional math course (preferably Statistics 11); Chemistry 11-11L, 21-21L or Biochemistry 7, 8; Psychology 10; Sociology 10 or 11; Speech 52 or 33; Physical Education (two courses); Foreign language and perspective course requirements.

Dental Hygiene Requirements: Cell Biology 41; Bacteriology 51 or 55; Biochemistry and Nutrition 40; General Physiology; Dental Anatomy-Physiology; Dental Radiology; Preclinical and Clinical Dental Hygiene (four courses); Histology; Periodontology; General and Oral Pathology; Dental Pharmacology; Dental Materials and Techniques; Dental Health Education; Community Dental Health; Oral Microbiology; Special Care in Dentistry; a dental hygiene elective; and a Dental Hygiene Practicum in one of the following fields of concentration: Dental Public Health, Geriatric Dentistry; Hospital Dentistry, Oral Biology, Pediatric Dentistry; or Periodontics.

Certificate in Dental Hygiene

Students may be admitted to the program without junior standing after completion of English 11 and 12, Chemistry 11, 11L and Chemistry 21, 21L (or Biochemistry 7 and 8), Psychology 10, Sociology 10 or 11, and Speech 52 or 33. After completion of the basic professional program, a Certificate in Dental Hygiene is awarded. Continued enrollment to complete the BS degree requirements is the option of the student.

Predental hygiene course work taken at other institutions should be approved in advance by the Office of Undergraduate Admissions. Other questions concerning the program should be directed to: **Director of Allied Dental Education Programs, School of Dentistry, The University of North Carolina at Chapel Hill, CB# 7450, 367 Old Dental Bldg., Chapel Hill, NC 27599.**

School of Medicine

Stuart Bondurant, M.D., *Dean*

Department of Medical Allied Health Professions

David E. Yoder, Ph.D., *Chairman*

A part of the School of Medicine since 1973, the department offers graduate, undergraduate and certificate level preparation in seven health professions. Baccalaureate degrees are offered in Clinical Laboratory Science and Radiologic Science. In addition, certificate programs are offered in Cytotechnology, Nuclear Medicine, and Radiation Therapy.

The Division of Speech and Hearing Sciences, a graduate program, offers courses for students anticipating graduate education in speech and hearing.

A course entitled Introduction to the Health Professions (MAHP 40) is offered by the Department. MAHP 40 is a one hour general elective Pass/Fail survey course providing an overview of the health related professions for which UNC-Chapel Hill offers training. The course informs students of the educational preparation, roles and functions, and career development in over twenty professional areas ranging from Biostatistics to Speech and Hearing Sciences.

Basic information on the bachelor of science degree programs following and additional information can be obtained from the Medical School catalog and from the program directors.

Division of Clinical Laboratory Science

(Formerly Divison of Medical Technology)

Vicky A. LeGrys, D.A., MT(ASCP), *Director*

Clinical laboratory scientists, also called medical technologists, are the members of the health care team responsible for laboratory management and the analysis of blood and other biological specimens. Clinical laboratory scientists perform a variety of laboratory tests, assure the quality of the test results, and correlate the data obtained. They play an essential role in the diagnosis and treatment of disease.

Clinical laboratory scientists perform tests in each of the following clinical laboratory areas: chemistry, hematology, microbiology, immunology/serology and blood bank.

The majority of clinical laboratory scientists are employed in hospital laboratories. Clinical laboratory scientists also work in commercial laboratories, physicians' office laboratories, research institutes and forensic laboratories. Clinical laboratory scientists may be employed as technical or sales representatives for corporations.

The first two years of courses are taken in the General College (or equivalent elsewhere). In the third and fourth years, students take courses in immunology, hematology, microbiology, clinical chemistry, and immunohematology in the School of Medicine. Senior clinical laboratory rotations are completed in the laboratories at the University of North Carolina Hospital. Upon successful completion of the curriculum, students are awarded a Bachelor of Science Degree and are eligible to take national examinations to become certified clinical laboratory scientists or medical technologists. A certificate is also awarded by the Division of Clinical Laboratory Science and the UNC Hospital.

Students are selected on the basis of science and math prerequisite courses, grades, written application, interviews, and letters of recommendation. Because enrollment is limited, students are encouraged to begin the application process early in the fall preceding the year of enrollment.

The following specific courses are required for admission into the clinical laboratory science program: Biology: 11-11L, 1 additional course with laboratory: 45, 63L is recommended; Chemistry: 11-11L, 21-21L, 61, 41-41L; Math: If entered the University prior to May, 1990: Two math courses from the following: Math 30, 31 or Stat 11; if entered the University after May, 1990: One math course from the following: Math 30, 31 or Stat 11; and all general education requirements including foreign language, physical education, English and General College perspectives.

For additional information, contact the **Division of Clinical Laboratory Science, Medical School Wing E, CB# 7145, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599 (919) 966-3011.**

Course Descriptions

51 Biochemistry (3). Physiologicial biochemistry of the basic metabolic pathways and alterations in selected diseases. Fall. LeGrys.

52 Hematology I (2). Introduction to the science of hematology. Topics include origin and development of cellular elements and biochemistry, physiology, and pathology of erythrocytes and platelets. Fall. Laudicina.

52L Hematology I Laboratory (1). Microscopic evaluation of normal and abnormal erythrocyte morphology. Clinical laboratory assays for evaluation of erythrocytes. Fall. Zwadyk and Laudicina.

53 Immunology (3). Basic immunology and serology. Innate and immune body defenses. The development and properties of cellular and humoral elements and their alterations in pathological and other conditions. Fall. Cronenberger.

53L Immunology Laboratory (1). Laboratory evaluation of body defenses and correlation with disease states. Clinical serological analyses include examples of basic techniques and correlation with immunity. Thornton and Cronenberger.

54 Microbiology I (3). Study of the life cycles and the infective mechanisms of the human parasites. Pathology of parasitic infections and public health considerations. Fall. Hilger.

54L Microbiology I Laboratory (1). Clinical laboratory diagnostic methods for human parasitic infections. Microscopic morphology of parasites and their various life cycle forms. Fall. Zwadyk and Hilger.

55 Clinical Laboratory Analysis (2). Introduction to laboratory math, instrumentation and basic techniques. Includes urinalysis and body fluid analysis. Fall. Beck, LeGrys, Thornton.

55L Clinical Laboratory Analysis Laboratory (1). Introduction to the basic skills associated with the clinical laboratory. Includes instrumentation, urinalysis and body fluid analysis. Fall. Thornton, Beck, LeGrys.

59 Clinical Laboratory Computer Science (1). Operation, laboratory setting, interfacing, clinical laboratory educational applications and evaluation, and use of commercial hardward and software. Spring. Cronenberger.

60 Clinical Chemistry (3). An introduction to the methods of analysis used in the clinical chemistry laboratory. Emphasis on the correlation of chemistry laboratory values with disease states. Spring. LeGrys.

60L Clinical Chemistry Laboratory (2). Performance of clinical laboratory assays for significant biochemical molecules. Principles of analysis, quality control and basic laboratory instrumentation are presented. Spring. Thornton and LeGrys.

61 Microbiology II (2). A comprehensive course describing bacteria which infect man. Correlation of diseases and pathological mechanisms of bacteria. Spring. Hilger.

61L Microbiology II (2). Laboratory sessions provide practical experience in clinical identification of bacteria. Spring. Zwadyk and Hilger.

62 Immunohematology (3). Introduction to blood group serology with an emphasis on the major systems, pretransfusion testing, and antibody identification. Spring. Beck.

62L Immunohematology Laboratory (2). Laboratory techniques for red cell typing, antibody identification, and pretransfusion testing. Spring. Thornton and Beck.

63 Clinical Laboratory Education (2). Introduction to the basic principles of clinical laboratory education, to include writing objectives, selecting learning format, developing test items and clinical teaching. Spring. Beck and LeGrys.

65 Hematology II (2). Origin and development of leukocytes, coagulation system and hemostasis. Their physiology, biochemistry, and alterations in various diseases and conditions. Spring. Laudicina.

65L Hematology II Laboratory (1). Microscopic evaluation of normal and abnormal leukocyte morphology. Clinical laboratory assays for evaluation of leukocytes and for evaluation of the coagulation systems. Spring. Zwadyk and Laudicina.

71 Clinical Chemistry Practicum (6). Hospital laboratory rotation in clinical chemistry. Fall and spring. LeGrys.

82 Clinical Hematology Practicum (4). Hospital laboratory rotation in clinical hematology. Fall and spring. Laudicina

83A & B Survey of Pathology I (1). Introduction to pathology emphasizing relationship to clinical laboratory medicine. Fall and spring. Hilger.

84 Clinical Microbiology Practicum (7). Hospital laboratory rotation in clinical microorganisms. Fall and spring. Hilger.

85 Clinical Urinalysis Practicum (1). Hospital laboratory rotation in clinical urinalysis. Fall and spring. Beck.

86 Clinical Immunology Practicum (2). Hospital laboratory rotation in clinical immunology. Fall and spring. Cronenberger.

88 Clinical Coagulation Practicum (2). Hospital laboratory rotation in clinical coagulation. Fall and spring. Laudicina.

89 Clinical Immunohematology Practicum (4). Hospital laboratory rotation in clinical immunohematology. Fall and spring. Beck.

92A & B Clinical Electives (1). Hospital laboratory rotation in an area of interest. Fall and spring. Zwadyk.

179 Clinical Laboratory Management (2). Introduction to the basic principles of management as it relates to laboratory administration. Spring. Laudicina.

Division of Radiologic Science

Joy Renner, *Director*

Bachelor of Science in Radiologic Science

The School of Medicine offers an undergraduate curriculum in Radiologic Science leading to the Bachelor of Science in Radiologic Science. The program is designed to prepare individuals for professional practice and associated responsibilities in the health specialty of radiologic technology.

Following completion of the first two years' work in the General College, students may be admitted to the professional major offered by the Division of Radiologic Science, Department of Medical Allied Health Professions of the School of Medicine. Students enrolled at other colleges and universities who are interested in transferring to the Chapel Hill campus following their sophomore year should contact the Office of Undergraduate Admissions and the Division of Radiologic Science early in their college career to assure proper planning and transferability of courses. Students are encouraged to begin the application process early in the fall preceding the year of intended enrollment. Transfer applications should be received in the Office of Undergraduate Admissions by January 15.

Since enrollment in the major is limited, completion of the prescribed General College curriculum does not assure the student a position in the professional class. Student selections are made on a competitive basis with consideration given to academic achievement, character, and demonstrated interest in radiologic technology as a professional career. The schedule of academic work includes:

General College Requirements

Basic Skills: English Composition, 2 courses; mathematical sciences, Math 10 and one other course selected from Math 30, Statistics 11, Computer Science 14, Math 32, Statistics 23 or Math 31; Foreign Language and all Perspective requirements. Six courses in the natural sciences are also required and must include: Chemistry 11, 11L or Biochemistry 7, 7L; Biology 11, 11L and Biology 45, 63L; Physics 24, 24L and Physics 25 and 25L; Psychology 10.

The curriculum in Radiologic Science includes courses in Anatomy, Physiology, Radiography, Imaging Methods, Research, and Clinical Practice. During the second year of the curriculum, the student elects areas of clinical concentration such as Magnetic Resonance Imaging, Pediatrics, Cardiac Catheterization, Health Physics, Orthopedics, and Vascular Imaging.

Course Descriptions

RADI 42 Introduction to Radiologic Science (4). Open to Radiologic Science students only. Lectures, discussions, demonstrations, and laboratory exercises are combined to introduce topics including: patient management, image characteristics, radiation protection, positioning skills, medical terminology, and the role of imaging sciences in health care. Summer Session II. Wright.

RADI 61 Radiography I (4) Prerequisite: RADI 42. The course prepares students for standard radiography of upper extremities, lower extremities, axial skeleton, bony thorax, chest, abdomen, and the basic skull considering pathologies and gross, radiographic, and cross- sectional anatomy. 3 lecture hours and 2 lab hours. Fall. Wright.

RADI 62 Radiographic Imaging I (4) Prerequisite: RADI 42. An overview of radiographic imaging methods examining the imaging process as a sequence of events from x-ray production through hard copy processing. The imaging equipment is discussed in terms of function, influence on the image, the impact of alteration on image characteristics and compensation techniques for changes in the sequence. 3 lecture hours and 2 lab hours. Fall. Burns.

RADI 63 Clinical Education I (4) Prerequisite: RADI 42. A clinical course focusing on the application and evaluation of general radiography in the hospital setting. With supervision, the student develops clinical skills through observation and participation in radiographic studies. 20 practicum hours. Fall. Renner, Gibson.

RADI 71 Radiography II (4) Prerequisite: RADI 61. The course content prepares students for standard radiography of cranial bones, facial bones, and special cranial projections. Contrast studies include gastrointestinal, urinary, biliary, cardiovascular, and other special procedures. The course includes pathologies, and gross, radiographic, and cross-sectional anatomy. 3 lecture hours and 2 lab hours. Spring. Wright.

RADI 72 Radiographic Imaging II (4) Prerequisite: RADI 62. A detailed study of specific elements of the radiographic process, with an emphasis on the interrelationships of the radiographic parameters, refinement of image analysis and problem-solving skills, and quality control testing for evaluating the performance of the radiographic equipment and accessories. 3 lecture hours and 2 lab hours. Spring. Burns.

RADI 73 Clinical Education II (4) Prerequisite: RADI 63. A continuation of RADI 63 with emphasis on the application and evaluation of more complex radiographic studies. 20 practicum hours. Spring. Renner, Gibson.

RADI 74 Clinical Internship (8) Prerequisite: RADI 73 and approval of the instructor. Under general supervision, the student will function at an increased level of responsibility in general diagnostic radiography in a variety of clinical settings outside of the university setting. 40 practicum hours. Summer Session I and II following first professional year. Renner, Gibson.

RADI 81 Trends in Radiography Practices (3) Prerequisite: completion of first professional year courses. A special topics course on contemporary issues affecting radiography services. Group projects stressing the radiologic technologist's role in the planning, design, staffing, and operation of a radiology service are required. 2 lecture and 2 seminar hours per week. Spring. Keene.

RADI 83 Clinical Education III (6) Prerequisite: RADI 74. A clinical course utilizing contract learning to provide students an opportunity to gain additional compentency in specialized areas of radiology services. 32 practicum and independent study hours. Fall. Renner, Gibson.

RADI 85 Radiologic Health Physics (3) Prerequisite: RADI 72 or permission of the instructor. A course in the physics of diagnostic radiology including radiation effects on tissue, radiation detection and measurement, protection methods and techniques, and environmental radiation issues. 3 lecture hours. Spring. Burns.

RADI 86 Issues and Research in Radiologic Science (3) Prerequisite: completion of first professional year courses. The major part of the course is devoted to an investigative project on a discipline-related topic of student interest. Select issues affecting professional affairs of radiologic technologists are also included. 3 lecture hours. Fall. Keene.

RADI 91 Practicum in Radiologic Science (4) Prerequisite: RADI 93. This course offers an elective clinical experience in an area of student interest with a review of general diagnostic radiography procedures. 40 practicum hours. Summer Session I. Renner, Gibson.

RADI 93 Clinical Education IV (4) Prerequisite: RADI 83. This course is a continuation of RADI 83 utilizing learning contracts to allow students to explore and gain additional expertise in various areas of radiology services. 20 practicum hours. Spring. Renner, Gibson.

RADI 96 Professional Communication (3) Prerequisite: completion of first professional year courses. This course provides for a brief cognitive and skills approach to communication skills, the teaching/learning process, and methods and materials of instruction and delivery. 3 lecture/discussion hours per week. Fall. Thorpe.

RADI 97 Management Practices for the Health Professional (3). Prerequisite: completion of first professional year courses. An introduction to principles and practices of health service organization management with an emphasis on radiology. 3 lecture hours. Spring. Keene.

For additional information on the Bachelor of Science in Radiologic Science contact the **Director, Division of Radiologic Science, CB#7130, Wing E, Medical School, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7130. (919) 966-5146.**

Division of Speech and Hearing Sciences

Jackson Roush, *Director*

Graduate study in speech and hearing sciences is concerned with the body of knowledge and scienfific study that pertains to both normal and abnormal speech, hearing, and language, and with professional, academic, and research activities in these areas. The Division of Speech and Hearing Sciences is a graduate program; however, there are preprofessional courses recommended for undergraduate students who anticipate pursuing a master's degree in speech-language pathology or audiology These included courses in anatomy and physiology of speech and hearing, language acquisition, phonetics, speech science, linguistics, statistics, and psychology of the exceptional child. Some of these courses may be taken at the undergraduate level through the Department of Speech Communication.

Course Descriptions

123 Introductory Audiology I *(Spanish 123, Education 243)* (3). Theory and practice of the measurement of hearing, causative factors in hearing loss, evaluation of audiometric results, demonstration and participation in clinical program in audiology. Fall. Staff.

130 Introduction to Phonetics *(Speech 158)* (3). A detailed study of the International Phonetic Alphabet with emphasis on the sound system of American English. Application of Phonetics to problems of pronunciation and articulation. Fall. Staff.

162 Language Acquisition (3). Theories of language learning: stages of language development; and relevant literature, including semantics, syntax, pragmatic, nonverbal, dialects and psycholinguistics. Fall. Layton.

170 Anatomy and Physiology of the Speech-Language and Hearing Mechanisms *(Speech 150)* (3). Anatomy and physiology of the speech producing and aural mechanisms. Fall. Harrison.

180 Habilitation and Rehabilitation (3). Prerequisite SPHS 123 or permission of instructor. Course deals with speechreading, auditory training, speech production, sensory processing, communication methodologies, clinical organization, educational placement, and other current issues relevant to the hearing impaired. Spring. Harrison.

Department of Microbiology and Immunology

Jeffrey Frelinger, Ph.D., *Chair*

The Department of Microbiology and Immunology, a part of the School of Medicine, participates actively in the undergraduate Curriculum in Biology, and several of our courses are open to students in the College of Arts and Sciences. Microbiology 51 and 55 are open to some students with a minimum of science prerequisites but are specifically designed for the pharmacy or nursing curriculum. Microbiology 108 is suggested for students considering a career in microbiology or immunology, but the entire sequence to 130 is available to the highly motivated student.

Course Descriptions

51 Elementary Bacteriology (4). Required for pharmacy students. Prerequisites, Chemistry 11 - 21. Covers the general principles and techniques of bacteriology and the relations of these organisms to sanitation, agriculture, medicine, and industry. Three lecture and two laboratory hours a week, fall. Twarog.

55 Elementary Pathogenic Microbiology (4). Required for nursing students and dental hygiene students, other students by permission of the Department. Prerequisites, Chemistry 11 - 21. A course covering the fundamental principles of microbiology, the relation of microorganisms to disease, modes of infection, and etiologic agents of the important infectious diseases. Three lecture and two laboratory hours a week, spring. Dalton.

105 Molecular and Cellular Basis of Prokaryotic Microbiology (4). Prerequisites, Organic Chemistry, permission of department except for department majors. Basic concepts of the structure, metabolism, growth and reproduction, genetics, and control and regulation of prokaryotes. Four lecture hours a week, spring. Cannon, staff.

108 Advanced Molecular Biology I *(Genetics 110, BIOC 110, PHCO 136, BIOL 178)* (3). DNA structure, function, and interactions in prokaryotic and eukaryotic systems, including chromosome structure, replication, recombination, repair, and genome fluidity. Three lecture hours, fall. Griffith, staff.

112 Introduction to Microbiology (3). Open only to dental students. A course covering basic aspects of microbiology and immunology including sterilization, action of antimicrobial chemotherapeutic agents, concepts of infection and immunity, and the study of certain selected infectious agents. Twenty-eight lecture hours and seven laboratory hours, spring. Gooder, staff.

114 Immunobiology (3). Prerequisites, Biology 11, Bacteriology 51 or 55, Chemistry 11, 21. For students with primary focus other than immunology. Immunochemistry; genetic control, regulation and development of cells and cell interactions; hypersensitivity, autoimmunity, resistance to infection. Two lectures, one seminar, fall. Snodgrass.

115 Special Topics in Bacteriology of Immunology (3 or more each semester). Permission of the Department required except for department majors. Designed to introduce the student to research methods. Minor investigative problems are conducted with advice and guidance of the staff. Hours and credit to be arranged, any term. May be repeated for credit two or more semesters. Staff.

120 Microbial Pathogenesis (4). Prerequisite, Microbiology 105, 110. Molecular and biological basis of pathogenic properties of bacteria. Four lecture hours per week, spring. Wyrick, staff.

130 Virology (4). Prerequisites, Microbiology 105, 110. Current concepts of the chemistry, structure, replication, genetics, and natural history of animal viruses and their host cells. Four lecture hours a week, fall. Bachenheimer.

156 Growth Control in Normal and Neoplastic Cells (3). Topics will include growth factors and their receptors, signal transduction, oncogenes, and anti- oncogenes. Three lecture hours, fall. Lee.

190 Eukaryotic Gene Organization *(Genetics 190)* (4). Prerequisites, Organic Chemistry, permission of instructor. Basic concepts of classical chromosomal structure, function, and mechanics Eukaryotic molecular genetics and cellular regulations will be emphasized. Readings, short answer examinations, term project. Four lecture hours, spring. Staff.

School of Nursing

Cynthia Freund, R.N., Ph.D., F.A.A.N., *Dean*
Deborah Thompson, R.N., Ed.D., *Director of Student Services*

The School of Nursing, housed in Carrington Hall, is one of five schools in the Division of Health Sciences. As such, it benefits from the contributions of personnel and facilities of the entire University. Teaching, research, and library facilities are used cooperatively to provide students with broad general education as well as preparation in professional nursing. Both undergraduate and graduate students in nursing take courses taught in other departments and schools in the University.

Established in 1950, the School of Nursing is committed to the improvement of health through education, research, and community service. Its undergraduate and graduate curricula and continuing education courses seek to reflect the changing health problems of society and to provide students with the tools to deal with those problems effectively. Students are admitted who have the level of preparation, intellectual competence, and personal qualities judged necessary for the study of nursing in a university. The School welcomes students of all races and both sexes, as well as older individuals seeking a new career and registered nurses wishing to complete the baccalaureate degree.

The faculty are actively engaged in advancing the profession through research, with the conviction that this scholarly activity enhances teaching and patient care. School facilities include a modern skills laboratory, a research support center, and a scholarly support team. Nursing students participate actively in campus activities and organizations. Additional organizations promote participation in the School of Nursing and the nursing profession.

The School provides clinical experiences in a variety of facilities, both urban and rural, in Chapel Hill and surrounding areas. Therefore, it is necessary for nursing students to have access to a car.

Curriculum

The School of Nursing offers an undergraduate program of study designed to provide students with the knowledge, skill, and understanding necessary to function effectively in all areas of nursing. The curriculum, leading to the Bachelor of Science in Nursing degree, includes two years of lower division courses in the General College and two years in the School of Nursing.

The general education requirements for the first two years of the Bachelor of Science in Nursing curriculum include 20 courses - that are offered to students in the General College. These courses, or lower division requirements, may be taken at any college or university but must be approved by the Office of Undergraduate Admissions of The University of North Carolina at Chapel Hill as being comparable to the courses offered on this campus. Below is a list and a brief description of the prerequisite requirements:

Courses in the nursing major are taken during the last two years. These courses build on a strong foundation in the sciences and humanities to develop the knowledge and skills needed to practice nursing in contemporary society. Clinical experiences take place in a broad variety of settings that reflect current patterns of health care delivery and provide opportunities for students to develop competence in technical skills, critical thinking, clinical judgment and decision making, interdisciplinary collaboration, and management of care.

Course	Academic semester hours credit
Basic English Skills (two courses) English 11, 12 (English Composition and Rhetoric)	6
Basic Mathematical Science (two courses) Statistics 11 or 11C and one other course	6
Natural Sciences Perspective (seven courses) Psychology 10 (General Psychology) Chemistry 11, 11L or Biochemistry 7, 7L Chemistry 21, 21L or Biochemisry8, 8L (General Descriptive Chemistry or Introduction to Biochemistry) Biology 11, 11L (General Zoology) Biology 45, 63L (Fundamentals of Human Anatomy & Physiology) Physiology 92 (Introduction to Physiology) Microbiology 55 (Elementary Pathogenic Microbiology) or Microbiology 51 (Elementary Bacteriology)	28
Social Sciences Perspective (two courses) one course in sociology or anthropology one course in economics, political science, sociology, or anthropology	6
Western Historical and Non-Western/Comparative Perspective (two courses) one course in pre-1700 Western history one course in either Western history (in breadth if the first was not) or the non-Western comparative viewpoint	6
Aesthetic Perspective (two courses) one course in literature one course in the fine arts	6
Philosophical Perspective (one course)	3
Foreign Language Skills (two courses) 3 semesters of the same foreign language*	6
Physical Education (two activity courses)	(2)
Total	**67**

*All students must pass foreign language 3 in either a high school language or a new language. The University will not grant credit for level I courses in the student's high school foreign language.

Admissions

Applications from members of minority groups, men, registered nurses, licensed practical nurses, military corpsmen, and mature individuals seeking a new career are welcomed.

All applications for admission must be made to the University Office of Undergraduate Admissions. The Director of the University Office of Undergraduate Admissions verifies the credentials of each applicant. All applicants must meet the entrance requirements of the General College.

The minimum undergraduate requirements adopted by the Board of Governors of the University to begin with the fall 1990 semester are:

A. a high school diploma or its equivalent;

B. four course units in college preparatory English;

C. three course units in mathematics, including geometry, algebra I, and algebra II;

D. two course units in social studies, including one unit in U.S. history and one unit in government and economics; and

E. three course units in science, including at least one unit in a life or biological science and at least one unit in a physical science, and including at least one laboratory course.

F. in addition, it is recommended that prospective students complete at least two course units in one foreign language, and that they take one foreign language course unit and one mathematics course unit in the 12th grade.

Freshmen

The high school graduate enters the General College as a freshman and then transfers into the School of Nursing in the junior year. Admission of freshmen is handled by the Office of Undergraduate Admissions, but applicants may also request an interview in the School of Nursing. In the selection of students, consideration is given to application information, Scholastic Aptitude Test, health records, scholastic records, personal references, and apparent qualifications for the study of professional nursing.

Freshman admission as a prenursing student does not guarantee admission into the nursing curriculum at the junior level. Students apply to the School of Nursing during the sophomore year.

Junior Transfer Students

The applicant who wishes to transfer into the nursing program as a junior student from another college or university should have completed 64 semester hours of transferable credit. Course substitutions and postponements may be considered; however, the University's policies on transfer students will be maintained.

The student who is planning to transfer to the University as a junior is encouraged to contact a member of the Student Services Office of the School of Nursing to discuss admission procedures, credits, and course plans. Admission to the School of Nursing is dependent on University admission, completion of required lower division courses, and approval of the Admissions Committee of the School of Nursing. Personal interviews may be required of applicants. Transfer applications should be received in the Office of Undergraduate Admissions by January 15.

Registered Nurse Applicants

The University of North Carolina at Chapel Hill School of Nursing encourages applications from registered nurses seeking to complete requirements for the BSN degree.

For the registered nurse student, the baccalaureate curriculum is modified to eliminate redundant experiences. RN students take a series of alternate form nursing courses that build on the knowledge and skills acquired in an associate degree or diploma program. RN students may enroll full time or part time.

The School of Nursing awards the enrolled RN student 33 hours of credit for nursing knowledge and skills. Knowledge and skills are validated through coursework in the BSN completion program.

UNC Hospitals, literally next door to the School of Nursing, offers flexible part-time, as well as full-time, employment opportunities for registered nurses enrolled in the UNC-Chapel Hill School of Nursing. The hospital's nursing department encourages nurses seeking part-time employment to interview in areas where they are most experienced. Those working part time enjoy flexibility both in scheduling and number of hours worked. Nurses who work at least 20 hours a week for six months may qualify for UNC Hospital's nurse scholarship program. After a year, employees become eligible for the hospital's tuition assistance program. Interested registered nurses may call (919) 966-2012 collect to request UNC Hospital's brochure and employment materials or to speak with the nurse recruiter about specific opportunities.

The registered nurse applicant must successfully complete the general education requirements, and meet the admission requirements. Biology 11 is not required if the RN already has completed a course equivalent to Biology 45. These courses may be taken at another college or university and must be comparable to those offered at The University of North Carolina at Chapel Hill. Students should present at least a "C" (2.0 on a 4.0 scale) average on all courses taken and be eligible to return to all previously attended institutions. Regulations regarding retention and graduation of RN students are the same as those followed by all other nursing students.

The registered nurse applicant also must be licensed in North Carolina. For legal reasons, state licensure is required for students to have laboratory practice in clinical facilities. For information on obtaining North Carolina registration, contact the **North Carolina Board of Nursing, P.O. Box 2129, Raleigh, North Carolina 27602, (919) 828-0740**. All students enrolled in the School of Nursing must carry professional liability (malpractice) insurance coverage.

For additional information about the BSN completion program for registered nurses, one may contact Debbie Thompson, RN Program Coordinator at (919) 966-4260.

For specific information on application procedures and requirements, registered nurses should contact the Student Services Office of the School of Nursing.

Financial Aid

The applicant who is interested in financial aid should contact the University Student Aid Office for information and application forms. This should be done when applying for admission. Students entering as freshmen to the University, transfer students enrolling in the School of Nursing as juniors, and registered nurses seeking the baccalaureate degree at The University of North Carolina at Chapel Hill may be considered for the James M. Johnston Scholarships and Awards in Nursing Education. These scholarships are based primarily on financial need. Other scholarships and loan funds for deserving students are made available by private and other funds.

The North Carolina Nurse Scholars Program was established by the General Assembly in 1989 to provide college scholarships for outstanding high school graduates and other persons interested in higher education to become registered nurses. The program also makes awards to RNs who return to school to earn the baccalaureate degree. Awards to freshmen are $5000 and are renewable each year for a maximum of four years. Awards to junior students are $3000 and are renewable for one year.

School of Pharmacy

William H. Campbell, Ph.D., *Dean*
George H. Cocolas, Ph.D., *Associate Dean*
A. Wayne Pittman, M.S., *Associate Dean*
Kevin L. Almond, B.S., *Assistant Dean*

The School of Pharmacy was established as an academic unit of The University of North Carolina at Chapel Hill in 1897 in response to urgent requests from the pharmacists of North Carolina. After many years in Howell Hall (named in honor of the School's first dean, Edward Vernon Howell), the School now occupies a modern well-equipped building, Beard Hall. Beard Hall was dedicated in 1960 and named in honor of the School's second dean, John Grover Beard. The School of Pharmacy is located in a medical center on the Chapel Hill campus and, with the schools of Medicine, Dentistry, Public Health, and Nursing, is a unit of the University's Division of Health Affairs.

The School benefits from the excellent resources, both on and off campus, that are required for a center of excellence for pharmaceutical education, research, and service.

In its educational program, emphasis is given to the curriculum required for the Bachelor of Science in Pharmacy degree (B.S. in Pharm.). A five-year curriculum for this degree became mandatory in all schools of pharmacy starting in 1960 through actions taken by the American Association of Colleges of Pharmacy and the National Association of Boards of Pharmacy. The School also offers an optional professional degree program, the Doctor of Pharmacy (Pharm.D.) degree. Both curriculums are designed and administered in accordance with the current and changing demands for pharmaceutical services in communities and institutions.

The School's curricula are broad and deep with respect to general education, training in the basic sciences and the pharmaceutical sciences, and professional principles and practices. They are administered with the flexibility necessary to accommodate the varying aspirations of individual students and, at the same time, with adequate rigidity to qualify the students as candidates for licensure as Registered Pharmacists and in every way for the important and expanding role of the pharmacist as a health professional. The graduate of the B.S. in Pharm. degree curriculum is qualified and motivated for the practice of clinical pharmacy (community pharmacy and institutional pharmacy), for professional and technical careers in industry and government, and for further study leading to advanced degrees in the pharmaceutical sciences and related physical, biological, and biomedical sciences. The Pharm.D. graduate is an advanced pharmacy specialist who can effectively cope with the complex problems in the delivery of comprehensive pharmaceutical health care.

The School of Pharmacy also offers a postbaccalaureate professional education and training program leading to the Doctor of Pharmacy degree. The School offers the M.S. and Ph.D. degree candidates and postdoctoral participants course work and research training and experience in the disciplines of Pharmaceutics and Medicinal Chemistry. It also offers an M.S. degree in the areas of Pharmacy Practice and Pharmacy Administration. An interdisciplinary Ph.D. degree is offered in Pharmacy Administration through the School of Public Health in conjunction with its Department of Health Policy Administration.

The School also engages in the continuing education of pharmacists and pharmaceutical scientists and technologists, supporting their efforts to keep abreast of an expanding and dynamic science and technology.

The faculty, staff, and students of the School of Pharmacy are actively involved in research and other scholarly pursuits in the professional, scientific, and technological aspects of pharmacy. Through their work they contribute to the knowledge of the pharmaceutical sciences, its recording and communication, and its application in the educational and service phases of the School's program.

In the third, or service, phase of the School's mission, the faculty and staff promote the disciplines and support the missions of the pharmacists in clinical practice and the pharmaceutical scientists in industry, government, or elsewhere. This is done particularly by motivating and providing for continuing education programs at all levels. The School also contributes to the development of expanding pharmaceutical services, by engaging in the exploratory research that leads to new and improved pharmaceutical services and new drug products.

The School of Pharmacy was admitted to membership in the American Association of Colleges of Pharmacy in 1917. This organization was formed for the promotion of sound educational programs and productive research and scholarly efforts in pharmacy and the pharmaceutical sciences. It maintains high standards for membership based on the quality of the faculty of its member institutions and the excellence of their instructional programs and their resources for education and research. The School of Pharmacy of The University of North Carolina at Chapel Hill is accredited by the American Council on Pharmaceutical Education. Graduates of the School's B.S. and Pharm.D. Programs may sit for the State Licensure Examination for pharmacists.

Admission to the School

Students are admitted to a three-year program of professional studies in the School of Pharmacy upon completion of at least two or more years (the prepharmacy years) of collegiate work in the General College of The University of North Carolina at Chapel Hill or in any accredited institution of higher learning. Arrangements should be made during the prepharmacy years to take the Pharmacy College Admissions Test (PCAT), which is required for admission into the School of Pharmacy. The American Association of Colleges of Pharmacy stipulates for its member schools that students transferring from a college other than another school of pharmacy must complete the required professional courses in proper sequence in the School of Pharmacy for the B.S. in Pharmacy Degree.

Each application for admission must be approved by the Director of Undergraduate Admissions of the University before it is forwarded to the Admissions Committee of the School of Pharmacy for review. Applications should be filed as early as possible, preferably before January 1 of the calendar year in which the student desires admission. Applications received later in the year will be given every consideration within the limits imposed by the number of students admitted at an earlier date.

For students who transfer to the School of Pharmacy from another accredited School of Pharmacy, the minimum residence required for the degree is one academic year, that is, two semesters within a twelve-month period. Such students must complete at least thirty semester hours while in residence in the School of Pharmacy.

Graduate degrees offered through the School of Pharmacy are administered by the Graduate School of The University of North Carolina at Chapel Hill. These degrees include the Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) in pharmacy, medicinal chemistry, and pharmacy administration.

For further information, please write to the Office of Student Affairs, School of Pharmacy, and refer to the special catalog of the School.

School of Public Health

Michel A. Ibrahim, M.D., M.P.H., Ph.D., *Dean*
Allan B. Steckler, B.S., M.P.H., Dr.P.H., *Associate Dean for Academic Programs*

The School of Public Health at The University of North Carolina at Chapel Hill was the fourth school of public health established in the United States and the first in a state university. It is one of twenty-four such schools in the nation accredited by the Council on Education for Public Health.

The mission of the School of Public Health is to improve the health and well-being of the population. This mission is accomplished through the interaction of:

Teaching - to educate students to assume and to continue professional and leadership roles in public health practice, policy, research, and teaching.

Research (basic and applied) - to advance knowledge and understanding of the biological, social, behavioral, environmental, and economic factors affecting the health status of the population.

Service and Professional Practice - to provide broad-based technical assistance and consultation on public health issues in the public and private sectors at local, state, national and international levels.

The School of Public Health has a curriculum in Public Health Nursing and seven departments: Biostatistics, Environmental Sciences and Engineering, Epidemiology, Health Behavior and Health Education, Health Policy and Administration, Maternal and Child Health, and Nutrition. All provide courses open to undergraduates and have graduate degree programs. Five have an undergraduate degree program: Biostatistics, Environmental Sciences and Engineering, Health Behavior and Health Education, Health Policy and Administration, and Nutrition. The Division of External Affairs and Community Health Service extends the School's commitment to community service as its public responsibility. The curriculum and departments participate in research and field service to the state, region, and the nation.

Interdisciplinary programs which provide opportunities for students in education, service, and research include: UNC Center for Health Promotion and Disease Prevention, Institute for Environmental Studies, North Carolina Occupational Safety and Health Educational Resource Center, and Occupational Health Studies Program.

The School of Public Health has close affiliations with other academic units on The University of North Carolina campuses as well as with other schools and universities, health and human service agencies, and research organizations at the local, state, national, and international level. These associations include joint sponsorship and effort in teaching and research programs, joint faculty appointments, and establishment of field training centers for students in a number of official and voluntary local, state, federal, and international health and human service organizations.

Bachelor of Science in Public Health

The undergraduate degree programs of the School of Public Health lead to a Bachelor of Science in Public Health (B.S.P.H.) degree. Students wishing to obtain the B.S.P.H. degree typically spend two years in the General College of The University of North Carolina at Chapel Hill (or in equivalent academic study elsewhere) and two subsequent years under the administration of the School of Public Health. A few persons with prior bachelor's degrees may also be admitted each year to study for the B.S.P.H. degree.

Since enrollment in the B.S.P.H. degree program is limited, completion of the prescribed freshman-sophomore prerequisites does not assure the student a position in the School of Public Health in the junior or a later academic year. Student selections are made, typically in the latter half of the sophomore year of course-work, on a competitive basis with consideration of academic achievement and personal qualifications.

The undergraduate public health degree programs combine features of a broad-based education with study in the professional area of public health. These programs seek to prepare individuals for professional positions in health and related fields, to provide a firm base for later graduate study, and to provide for general enrichment of the future lives of the students.

There are five options for a field of concentration for the B.S.P.H. degree: Biostatistics, Environmental Science and Policy, Health Behavior and Health Education, Health Policy and Administration, and Nutrition.

The *Biostatistics* major gives students preparation in the application of quantitative knowledge to a variety of health and related matters dealing, for example, with the physical environment; the population; patterns of disease, disability, and death; and the costs and effects of health services. Coursework in mathematics is a prerequisite for this major.

The undergraduate *Environmental Science and Policy* major emphasizes protection of the environment and prevention of diseases caused by environmental contaminants. Students become capable of analyzing the legal, political, philosophical, and social dimensions of environmental problems, and apply this knowledge to one complete problem in the form of a senior thesis. Coursework in biology, chemistry, geology, and physics is expected before admission to the program.

The undergraduate *Health Behavior and Health Education* program is concerned with ways to help people of diverse backgrounds improve their well-being in the most healthful way. Special attention is given to behavioral change. Courses in psychology, anthropology, and sociology are desirable prerequisites for this major. The coursework in the program includes an extended period of field training in which students may help plan, conduct, and evaluate educational programs for professional and lay groups in a variety of settings.

The undergraduate major in *Health Policy and Administration* prepares students to (1) assume positions requiring basic administrative operational skills in such areas as financial management, supervision, planning, and general administration and (2) pursue graduate study in a variety of fields, including health, business and public administration, law, social work and medicine. Basic economics and accounting courses are prerequisites for this major. Summer field placements for the students may be in a hospital, nursing home, public health department, or other similar organization.

The *Nutrition* undergraduate program emphasizes the relationship between nutrition and health. This program is designed to meet the educational objectives of students with at least two alternative career goals; entry-level positions in community nutrition and dietetics, and preprofessional study for careers in medicine, dentistry, and other health fields. Basic courses in biology and chemistry are prerequisites for admission.

Specific requirements for the B.S.P.H. degree are as follows:

A. At least 120 semester hours of courses, not counting physical education activities courses. A 2.0 (C) average on all work attempted at The University of North Carolina at Chapel Hill. The last 30 hours of degree credit taken in residence in Chapel Hill.

B. A freshman-sophomore pattern of approximately 60 semester hours of courses, which must include:
   1. English 11, 12
   2. Foreign Language coursework as specified in the section of this Bulletin on Academic Organization.
   3. Two courses from the Mathematical Sciences option of the General College (beyond Math 10).
   4. Biology 11, 11L, and an additional acceptable Natural Sciences Perspective course.
   5. Two acceptable Social Sciences Perspective courses (from two different departments).
   6. Two acceptable Aesthetic Perspective courses (one in literature and one in fine arts).
   7. One acceptable Philosophical Perspective course.
   8. Two acceptable Western Historical/Non-Western/Comparative Perspective courses, including one covering a period of Western History before 1700.
   9. Two physical education activity courses.

C. A junior-senior course program of approximately 60 semester hours to include Biostatistics 101 or 110, Environmental Sciences and Engineering 51, Epidemiology 160, and a minimum of three electives outside the School of Public Health.

D. A satisfactory major in one of the five fields of concentration as prescribed in the following summaries of required courses (which include some courses that can be used also in meeting the requirements for mathematical science and Perspective courses specified for the freshman-sophomore years).

Biostatistics

Freshman-Sophomore: Mathematics 31, 32, 33; Computer Science 14, BIOL 11, 11L.

Junior-Senior: Biostatistics 110, 111, 145, 150, 162, 164, 191; Mathematics 81 (or 83), 116 (or 147), 121 (or 108), Biology 54 (or 53) EPID 160, ENVR 51.

Environmental Science and Policy

Freshman-Sophomore: Chemistry 11, 11L, 21, 21L; Physics 24, 24L, 25, 25L; Mathematics 31, 32; Computer Science 14; Geology 41 or 48; Biology 54.

Junior-Senior: Environmental Sciences and Engineering 51, 95, 98, and 15 more hours within the Department (These courses should be chosen in consultation with the director of the undergraduate program.) Three additional courses related to the thesis topic (Environmental Sciences and Engineering 98) must be chosen from other departments such as: Biology, Chemistry, Geology, Marine Sciences, and Public Policy Analysis.

Health Behavior and Health Education

Freshman-Sophomore: Anthropology 41; Psychology 10, 33; Sociology 10 (or 20); Speech Communication 55 (or 33); Statistics 11 plus one of the following: Mathematics 16, 22, 30, 31, 81, Computer 14 or Philosophy 21.

Junior-Senior: Health Behavior and Health Education 102, 103, 133 or Psychology 188 or Leisure Studies and Recreation Administration 130; three courses from the Health Behavior and Health Education special populations series 104, 108, 109, 160, 189, or 190; Health Policy and Administration 70, 71 and 145; Nutrition 40; four semester hours of field experience (Health Behavior and Health

Education 90); and two semester hours of field experience evaluation (Health Behavior and Health Education 91). Strongly recommended: additional courses in the social sciences and Education 45, or Education Curriculum and Instruction 111 or 113.

Health Policy and Administration

Freshman-Sophomore: Business Administration 71; Economics 10; two of the following mathematical sciences courses: Mathematics 22, 30, 31, Statistics 23.

Junior-Senior: Health Policy and Administration 70, 71, 72, 73, 75, 83, 85, 145 and eight more hours of Health Policy and Administration courses exclusive of internship; a 12-week internship (Health Policy and Administration 97 and 98) between the junior and senior years.

Nutrition

Freshman-Sophomore: Chemistry 11, 11L, 21, 21L, 61 (Chemistry 62 also strongly recommended); Mathematics 30, 31 (or higher mathematics courses); Nutrition 40. Biology 45, 63L (or Physical Education 75, 76); Physics 24 and 25 with at least one laboratory (with Physics 20 a possible alternative) required for graduation; may be taken alternatively in the junior-senior years.

Junior-Senior: Nutrition 100, 110, 120, 121, 132, 140, 150 (or Chemistry 130); Biology 45, 63L (or Physical Education 75, 76) if not taken previously; Physics 24 and 25 with at least one laboratory (with Physics 20 a possible alternative) if not taken previously. Strongly recommended: Chemistry 62 (if not already taken). Students interested in meeting Plan V Minimum Academic Requirements of the American Dietetic Association should also take: Psychology 10; Political Science 41; Anthropology 41 or Sociology 10; Microbiology 51 (or 55); Health Policy and Administration 83; (or Business Administration 150) and Nutrition 130, 131 and 141.

Additional information about the B.S.P.H. degree programs and requirements for admission to them can be obtained from the Dean's Office in the School of Public Health and from departments with an undergraduate public health major.

Department of Biostatistics

Barry H. Margolin, *Chairman*

BIOS 97 Readings in Biostatistics (1 - 3). Directed readings or laboratory study. May be taken more than once. Two to six laboratory hours a week. Fall, spring, and summer. Staff.

BIOS 99 Honors in Biostatistics (3). Prerequisite, Biostatistics 97. Directed research. Written and oral reports required, fall, spring, and summer. Staff.

BIOS 101 Fundamentals of Biostatistics (3). Introduction to procedures in collection, summarization, analysis, and presentation of data. Topics include data sampling, experimentation, measurement, descriptive statistics, probability, confidence intervals, and tests of hypotheses. Fall and summer. Quade.

BIOS 106 Mathematical Methods in Biostatistics (1). Prerequisite: Mathematics 32. Calculus and special mathematical techniques necessary for biostatistics. Summer. Staff.

BIOS 107 Matrix Theory in Biostatistics (1). Prerequisite: Mathematics 32. Review of matrix theory results useful in statistics. Summer. Staff.

BIOS 110 Principles of Statistical Inference (3). Permission of the instructor required except for majors in School of Public Health who have knowledge of basic descriptive statistics. Major topics include elementary probability theory, probability distributions, estimation, tests of hypotheses, chi- squared procedures, regression, and correlation. Fall and spring. Turnbull, Shachtman.

BIOS 111 Introduction to Statistical Computing and Data Management (3). Prerequisite, BIOS 101 or equivalent and permission of instructor. Introduction to use of computers to process and analyze data, components of digital computers, characteristics of magnetic storage devices, use of JCL and utility programs, concepts and techniques of research data management, use of statistical program packages and interpretation. Fall and spring. Gallagher.

BIOS 120 Special Techniques in Biometry (1 - 3). Special topics of current interest in Biometry. Fall, spring, and summer. Staff.

BIOS 124 Quantitative Methods in Planning and Evaluation *(HPAA 144)* (3). Planning cycle, methods overview, data sources, PERT budgeting, health indices, measurement of goal fulfillment, achievement, effectiveness, efficiency, research designs, benefit cost analysis, decision analysis, probability utility, and decision trees. Spring. Staff.

BIOS 130 Research Issues in Mental Health Statistics (3). Prerequisites, BIOS 110 and EPID 160, or permission of instructor. Concepts of measurement, history, and current status of classification schemata for mental disorders, methods of data analysis, and research designs. On demand. Turnbull.

BIOS 135 Probability and Statistics (4). Prerequisite, Math 32 or equivalent. Elements of descriptive statistics. Basics of probability; random variables and their probability distributions; special distributions, including the binomial, Poisson, normal, gamma; expectation and moments; linear combinations of random variables. Elements of estimation and hypothesis testing; analysis of variance; multiple regression; analysis of categorical data; some nonparametric methods. Particular attention is given to the statistical treatment of environmental science and engineering problems. Fall. Symons.

BIOS 140 Problems in Biostatistics (1 or more). Prerequisites to be arranged with the faculty in each case. A course for students of public health who wish to make a study of some special problem in the statistics of the life sciences and public health. Fall, spring, and summer. Staff.

BIOS 145 Principles of Experimental Analysis (3). Prerequisite, Biostatistics 110 or 135 or equivalent, and permission of instructor except for majors in the School of Public Health. Continuation of Biostatistics 110; the analysis of experimental and observational data, including multiple regression, and analysis of variance and covariance. Fall and spring. Staff.

BIOS 150 Elements of Probability and Statistical Inference *(Genetics 150)* (3). Prerequisite, Math 32 or equivalent. Fundamentals of probability; discrete and continuous distributions; functions of random variables; descriptive statistics; fundamentals of statistical inference, including estimation and hypothesis testing. Fall. Shachtman.

BIOS 160 Probability and Statistical Inference I (3). Prerequisite, Mathematics 33 or equivalent. Introduction to probability; discrete and continuous random variables; expectation theory; bivariate and multivariate distribution theory; regression and correlation; linear functions of random variables; theory of sampling; introduction to estimation and hypothesis testing. Fall. Kupper.

BIOS 161 Probability and Statistical Inference II (3). Prerequisite, Biostatistics 160. Distribution of functions of random variables; central limit theorem; estimation theory; maximum likelihood methods; hypothesis testing; power, Neyman-Pearson Theorem, likelihood ratio tests, noncentral distributions. Spring. Kupper.

BIOS 162 Introductory Applied Statistics (3). Prerequisite, Biostatistics 111, 150, or equivalent. Approaches to problems of description, goodness of fit, univariate location and scale, bivariate independence and correlation, and comparison of independent or matched samples, involving categorical, discrete, normal, or ranked data. Spring. Quade.

BIOS 163 Introduction to Linear Models (3). Prerequisites, Biostatistics 107 or Mathematics 147, BIOS 111, 145, 150, or equivalents. Re–gression analysis in matrix terms, general linear hypothesis, diagn–ostics, model building. One- and two-way ANOVA with fixed or random effects. Power; algorithms; analysis of covariance. Fall. Muller.

BIOS 164 Sample Survey Methodology *(Statistics 104)* (3). Prerequisite, Biostatistics 150 or equivalent or permission of instructor. Fundamental principles and methods associated with survey sampling, giving primary attention to as nonmathematical as possible a treatment of simple random sampling, stratified sampling, and cluster sampling. Also, techniques of questionnaire design, the problems of nonresponse, and sources of nonsampling errors. Practical experience in the applied aspects of sampling is provided by student participation in the design, execution, and analysis of an actual survey. Spring. Kalsbeek.

BIOS 165 Analysis of Categorical Data (3). Prerequisites, Biostatistics 145, 150, and 162 or permission of instructor. Introduction to the analysis of categorized data: including rates, ratios, proportions; relative risk and odds ratios; Cochran-Mantel-Haenszel procedure; survivorship and life table methods; linear models for categorical data. Applications in demography, epidemiology, and medicine. Fall. Koch.

BIOS 166 Applied Multivariate Analysis *(Statistics 160)* (3). Prerequisite, Biostatistics 163 or equivalent. Application of multivariate techniques, with emphasis on the use of computer programs. Multivariate analysis of variance, multivariate multiple regression, weighted least squares, principal component analysis, canonical correlation and related techniques. Spring. Muller.

BIOS 167 Applied Stochastic Processes *(Operations Research 167)* (3). Prerequisite, Biostatistics 161 or equivalent. Markov chains, Poisson processes and extensions, epidemic models, branching processes and other stochastic models of empirical processes. Disease, population, and other biostatistical applications. Fall and Spring. Sen.

BIOS 168 Design of Public Health Studies (3). Prerequisites, Biostatistics 145, 150, or equivalents. Statistical concepts in basic Public Health study designs: cross-sectional, case-control, prospective and experimental (including clinical trials). Validity, measurement of response, sample size determination, matching, and random allocation methods. Summer. Davis.

BIOS 170 Demographic Techniques I (3). Prerequisite, Biostatistics 101 or equivalent. Source and interpretation of demographic data; rates and ratios, standardization, complete and abridged life tables; estimation and projection of fertility, mortality, migration, and population composition. Fall. Suchindran, Bilsborrow.

BIOS 180 Introductory Survivorship Analysis (3). Prerequisite, BIOS 161 or permission of instructor. Introduction to concepts and techniques used in the analysis of time to event data, including censoring, hazard rates, estimation of survival curves, regression techniques, applications to clinical trials. Spring. Staff.

BIOS 191 Field Observation in Biostatistics (1). Field visits to, and evaluation of, major nonacademioc biostatistical programs in the Research Triangle area. Field fee $25.00 Fall. Turnbull.

Department of Environmental Sciences and Engineering

William H. Glaze, *Chair*

ENVR 51 Environmental Protection (3). Prerequisite, natural science requirement of the General College. A man-centered study of the health, economic, ecological, and aesthetic effects of our use of water, air, and land. The physical, biological, and chemical processes that occur in nature are studied, particularly as they relate to man's activities and his generation of waste residues, heat, noise, and radiation. Methods of control and for abatement for environmental degradation are presented. Three lecture hours a week. Fall and spring. Francisco.

ENVR 95 Analysis and Solution of Environmental Problems (3). Prerequisites, ENVR 51 and permission of instructor. A selected environmental problem is analyzed for causes, methods of mitigation, and feasibility of proposed solutions. One lecture and two seminar hours per week. Crawford-Brown.

ENVR 98 Senior Thesis (3). Prerequisite, permission of instructor. Development, research, and writing of senior thesis for environmental sciences undergraduates. Three lecture hours per week. Crawford-Brown.

ENVR 99 Undergraduate Research (3). Directed readings or laboratory study. Written report is required. May be taken more than once for credit. Six-nine hours per week. Fall, spring, and summer. Staff.

ENVR 100 Readings in Environmental Sciences and Engineering (1 - 6). Prerequisite, permission required for students outside the Department. Extensive library study of a specific subject in environmental sciences and engineering. The subject and requirements of the project are arranged with the faculty in each instance. Fall, spring, and summer. Staff.

ENVR 101 Survey of Environmental Problems (3). A survey of basic environmental issues for the nontechnologist, including physical dynamics of the natural environment, specific environmental problems, and quality control techniques. Spring. Staff.

ENVR 111 Introduction to Environmental Policy (3). Current issues in environmental protection. Analysis of environmental problems and decisions from the viewpoints of the various disciplines concerned with the assessment of risk, policy development and environmental management. Fall. Shiffman.

ENVR 117 Engineered Water Systems and Health (3). Prerequisite, Biostatistics 105, Mathematics 34 or equivalents. Permission of instructor required. The quantitative assessment of the effects of water supply and wastewater disposal practices on infectious and environmentally derived diseases. Examples drawn from developed and underdeveloped countries. Attention given to implications for engineering design. Fall. Staff.

ENVR 118 Quantitative Studies for Environmental Sciences (3). Applied mathematics from the viewpoint of those studying environmental sciences. Specific aspects of differential and integral calculus are developed as needed in environmental hygiene. Second summer session. Reist.

ENVR 122 Chemical Equilibria in Natural Waters (3). Prerequisites, Chemistry 11 and 21. Principles and applications of water chemistry. Thermodynamic background for equilibrium calculations is presented. Proton transfer, solubility, complex formation and redox reactions in natural waters are discussed. Three lecture hours a week. Fall. Singer.

ENVR 122L Aquatic Chemistry Laboratory (1). Corequisite. Environmental Sciences and Engineering 122. Wet chemical and computational laboratory exercises illustrating principles and applications of chemical equilibria in natural waters. Two laboratory hours per week. Fall. Singer

ENVR 123 Organic Materials in Natural Waters (3). Prerequisites, organic chemistry, instrumental analysis, or permission of the instructor. Origins of natural product organic materials in rivers and lakes. Survey of synthetic organic waste sources, microbial transformations and metal transport properties. Organic water quality monitoring and rationale for water quality criteria and standards. Spring, alternate years. Christman.

ENVR 124 Environmental Analytical Chemistry (3). Sampling, sample treatment, data evaluation, electrochemical, spectrophotometric, and mass spectral techniques for students with no analytical chemistry background. Three lecture hours per week, spring. Shuman, Charles.

ENVR 127 Oceanography *(Marine Sciences 101, Biology 126, Geology 101).* (3). Prerequisites, one college-level course in Biology, Chemistry, Geology, or Physics. An interdisciplinary study of the sea and the interrelationship of marine processes. Three lecture hours a week. Fall, Neumann and staff. Spring. Frankenberg and staff.

ENVR 128 Chemical Oceanography *(Marine Sciences 105)* (3). Prerequisites, one semester of physical chemistry or Environmental Sciences 122, Chemistry 180, or equivalent. Variation and abundance of sea water constituents, and the chemical, physical, and biological processes contributing to their distribution as well as problems of dispersion of conservative and nonconservative substances are considered. Spring. Martens, Johnson.

ENVR 128L Chemical Oceanography Lab *(Marine Sciences 105L)* (1). Two laboratory hours a week, spring. Martens.

ENVR 132 Limnology and Water Pollution (4). Prerequisites, one year each of biology and chemistry. Basic aspects of physical, chemical, and biological limnology, including impacts of anthropogenic pollutants and relationships to watersheds, streams, and estuaries. Three lecture and two laboratory hours per week. Spring. Staff.

ENVR 133 Sources, Transport, and Fate of Environmentally Important Materials (3). Prerequisites, one year of college chemistry, and one semester each of college physics, calculus, and biology or permission of the instructor. Multimedia processes important in environmental compartments. Development of predictive abilities for spatial and temporal alterations and movements of materials. Three lecture hours per week, spring. Staff.

ENVR 134 Ecological Microbiology (3). Prerequisite, one course in general microbiology. A description of microbial populations and communities, the environmental processes they influence, and how they can be controlled to the benefit of man. Two lecture and three laboratory hours per week. Spring. Pfaender.

ENVR 135 Biology in Environmental Science (3). Prerequisite, general chemistry. An introduction to biology, including principles of biochemistry, cell structure, classification, and ecology. Laboratory emphasizes techniques utilized in measurement and control of environmental pollution. Two lecture and two laboratory hours per week. Fall. Francisco.

ENVR 136 Biological Oceanography *(Biology 140, Marine Sciences 104)* (4). Prerequisites, Biology 54 or 105 or permission of instructor. Physical, chemical and biological factors characterizing estuarine and marine environments emphasizing factors controlling plant and animal populations including methods of analysis, sampling and identification. Five lectures and laboratory hours a week. Summer. Staff.

ENVR 137 Ecology of Wetlands *(Marine Sciences 137)* (4). Prerequisites, 1 year of biology, 1 year of chemistry, 1 semester of ecology, and permission of instructor. An introduction to the functioning of freshwater and estuarine marsh and swamp ecosystems, with emphasis on systems of the southeastern U.S. Fall. Kuenzler.

ENVR 141 Air and Industrial Hygiene (4). Not open to students who have received credit for Environmental Sciences 142. Problem definition, sources of information, health effects, legislative framework and control methods. Hazard recognition, evaluation and remediation approaches for community and industrial environments. Fall. Fox.

ENVR 142 Interdisciplinary Approaches to Occupational Health (2). Prerequisite, permission of instructor. Collaborative approach to investigate occupational health problems utilizing expertise of multidisciplines including: nurses, physicians, industrial hygienists, and safety professionals. Includes didactic sessions, worksite visits,c and a collaborative project. Fall. Staff.

ENVR 144 Industrial Toxicology (2). Toxicological assessment of and a case presentation of related exposure is given. A conceptual approach is utilized to design appropriate programs to prevent worker ill health due to industrial toxicant exposure. Two lecture hours per week, spring. Staff.

ENVR 145 Introduction to Aerosol Science (4). Prerequisite, admission to the Department of Environmental Sciences and Engineering or permission of the instructor. Physical and chemical principles underlying behavior of particles suspended in air. Topics include rectilinear and curvilinear motion of the particles in a force field, diffusion, evaporation and condensation, electrical and optical properties and particle coagulation, as well as the behavior of the cloud in toto. Three lecture and two laboratory hours a week. Fall. Reist, Leith.

ENVR 145L Aerosol Science Laboratory (2). Pre- or corequisite, Environmental Sciences 145. Basic laboratory exercises in aerosol sciences. Fall. Reist, Leith.

ENVR 147 Occupational Safety (2). Fundamentals of occupational safety with emphasis on legislation and organization of industrial safety programs including hazard recognition, analysis, control, and motivational factors pertaining to industrial accident prevention. Fall. Staff.

ENVR 149 Health Hazards of Industrial Operation (3). Prerequisite, ENVR 141. An introduction of the health hazards associated with the various unit operations of industry. Field trips to local industries are planned. Spring. Flynn.

ENVR 153 Environmental Management and Policy (3). (PLAN 153, PUPA 153). Prerequisites, ENVR 51 or graduate standing. Intensive introduction to environmental management and policy, including environmental and health risks, policy institutions, processes, and instruments, policy analysis, and major elements of American environmental policy. Lectures and case studies. Three lecture hours per week. Fall. Andrews.

ENVR 158 Mathematical Methods of Environmental Modeling (3). Prerequisite, Calculus. Mathematical basis of environmental models is reviewed, including an overview of axiomatic systems, differential equations, transforms, parameter estimation, and numerical simulations. Fall. Crawford-Brown.

ENVR 159 Analytic Thought and Environmental Risk (3). Prerequisite, permission of instructor. The principles of logical analysis are developed and applied to environmental problems. Concepts such as evidence, inference, and proof are formalized for calculations of environmental risk. Two lecture hours and one seminar hour per week. Spring. Crawford-Brown.

ENVR 163 Radiation Physics and Instrumentation (4). Prerequisite, Calculus. Radioactive decay and the interaction of radiation with matter. Laboratory study of radiation measurements. Fall. Watson, Crawford-Brown.

ENVR 164 Field Observations in Radiological Hygiene (2). Prerequisite, permission of instructor. Field observations of health physics practices at nuclear fuel cycle facilities and government nuclear facilities. Field fee, $175.00. Spring. Watson.

ENVR 165 Advanced Radiological Laboratory (2). Intensive radiological laboratory training at Oak Ridge Associated Universities. Tour of research facilities at Oak Ridge National Laboratory. Field fee, $200.00. Spring, alternate years. Crawford-Brown.

ENVR 167 Introduction to Medical Physics (2). Permission of the instructor required. The physics of radiation therapy, diagnostic radiology, and nuclear medicine are introduced by practicing clinical physicists. Fall. Crawford-Brown, Chaney, Johnston, and Washburn.

ENVR 168 Comprehensive Radiation Biology (2). (Oral Diagnosis 190). Prerequisite, Biology 11 and Introductory Physics. A survey of the biological effects of ionizing and non-ionizing radiations ranging from the molecular to the eco system level. Related topics such as the effects of nuclear war and food irradiation also are included. Spring. Tyndall.

ENVR 171 Reactor and Mass Transport Principles (3). Prerequisites, MATH 124 or equivalent. Application of chemical engineering fundamentals to describe physical, chemical, and biological processes important for water/wastewater treatment, air pollution control, and processes in natural systems. Three lecture hours per week. Fall. DiGiano.

ENVR 174 Water and Wastes Treatment Processes (4). Prerequisite, ENVR 122. Permission of instructor required, or corequisite, ENVR 131. A study of unit processes for water and waste water treatment. Processes discussed include gas transfer, coagulation, disinfection, absorption, demineralization, sedimentation, filtration, aerobic, and anaerobic biological treatment. Three lecture and two lab hours a week. Spring. Singer.

ENVR 176 Ground Water Engineering (3). Prerequisites, MATH 31 and MATH 32. Use of analytical solutions to define ground water movement and contaminant transport in subsurface environments. Three lecture hours a week. Fall. Miller.

ENVR 183 Special Topics in Water Resources (2). Prerequisite, permission of instructor. Interdisciplinary exploration of the principal issues involved in water resource planning, conservation, development, and management. Includes the nature of water resources, principal water uses and conflicts, public objectives and policy issues, institutional arrangements, legal framework, planning, and governmental agency programs. Spring. Staff.

ENVR 190 Reading in Environmental Health Sciences (1-6). Prerequisite, permission of the instructor. Extensive library study of a specific subject in Environmental Health Sciences. One to six seminar hours per week. Fall, spring, summer. EHS Staff.

ENVR 191 Health and Ecological Effects of Environmental Agents (3). Prerequisites, basic biology, chemistry through organic, math through calculus; permission of instructor if prerequisites not met. Interactions of environmental agents (chemicals, infectious organisms, radiation) with biological systems including humans, with particular attention to routes of entry, distribution, metabolism, elimination, and mechanisms of adverse effects. Three lecture hours per week. Fall. EHS Staff.

ENVR 192 Techniques in Environmental Health Sciences (1). Prerequisites, basic biology, chemistry through organic, math through calculus; permission of instructor if prerequisites not met. A practical introduction to the measurement of biological endpoints, emphasizing adverse effects of environmental agents, using laboratory and field techniques. Two laboratory hours per week. Fall. EHS Staff.

ENVR 195 Environmental Health Microbiology (3). Prerequisite, introductory course in microbiology. Presentation of the microbes of public health importance in water, food, air, including their detection, occurrence, transport, and survival in the environment; epidemiology and risks from environmental exposure. Two lecture and two laboratory hours per week. Spring, 1993 and alternate years. Sobsey.

ENVR 198 Biophysical Theory of Environmental Health (3). The biophysical basis of models of intake, metabolism, transformation, and effects of environmental pollutants in organisms is developed. Evidence supporting the axiomatic structures is reviewed. Three lecture hours per week. Fall. Crawford-Brown.

Department of Epidemiology

Barbara S. Hulka, *Chair*

EPID 160 Principles of Epidemiology (3). Pre- or corequisite, Introductory Biostatistics. An introductory course that considers the meaning and scope of epidemiology and the uses of morbidity, mortality, and other vital statistics data in the scientific appraisal of community health. Two lecture and two laboratory hours a week. Fall and spring. Aldrich, Cornoni-Huntley.

Department of Health Behavior and Health Education

James R. Sorenson, *Chair*

HBHE 9 Freshman Seminar (3). For freshmen only. A review of the nature of modern health problems and the roles of the individual, the community, the health professions and agencies in medical care and health maintenance. Two and one-half lecture hours per week, fall. Staff.

HBHE 50 Personal and Community Health Behavior (3). Relation of living habits and practices to health maintenance, disease prevention, and use of the health care system. Spring. Staff.

HBHE 90 Field Training in Health Education (4). Experience as a functioning health educator in a community setting under supervision. Field fee $100. Fall, spring, summer. Hatch and staff.

HBHE 91 Field Training Evaluation (2). Pre- or corequisite, HBHE 90. Permission of instructor. Evaluation of field practice. Written report required. Fall, spring, summer. Staff.

HBHE 97 Readings in Health Education (3 - 6). Directed readings or laboratory study. Written report required. Six to twelve hours a week, fall, spring and summer. Staff.

HBHE 99 Honors in Health Behavior and Health Education (3 - 6). Prerequisite, Health Behavior and Health Education 97. Directed research. Written report required. Six to twelve hours per week, fall, spring and summer. Staff.

HBHE 101 Aging and Human Development *(Public Health Nursing/ Health Policy and Administration124/Nutrition 101)* (3). Biological, medical demographic, and social aspects of aging. New methods and concepts of aging processes and their implications. Three lecture hours per week, spring. Staff.

HBHE 102 Defining Public Health Problems (3). Permission of instructor. Overview of field of public health; focus on cultural, psychological, and social forces that influence health behavior. Treatment of public health principles, theories, and strategies basic to the practice of health education. Three lecture hours per week. Fall. Jackson.

HBHE 103 Implementing and Assessing Health Education (3). Permission of instructor for non-majors. Focus on core understandings and skills needed to initiate and evaluate practice at the individual, small group, and community levels. Topics include support groups, patient education, and advocacy. Three lecture hours per week. Spring. Jackson.

HBHE 104 School Organization for Health Education (3). Permission required for nonmajors. Introduction to school health education and administration including components and organization of a comprehensive school health program, curriculum design, and evaluation. Two lecture and two laboratory hours a week, spring. Barr.

HBHE 108 Minority Health and Health Services Delivery (2). The life experiences of ethnic minorities in the United States with special reference to the implications for their participation in health programs. Two lecture hours per week, spring. Hatch.

HBHE 109 Rural Health and Community Action (3). Permission of instructor. Community education and action as modes of intervention in rural communities. Cross-cultural perspectives of rural health development. Three seminar hours a week. Hatch.

HBHE 120 Promoting Health in a College Setting (3). Lectures and seminars on planning, implementing, and evaluating health education programs in a college setting with emphasis on health promotion and wellness. Two lecture and two seminar hours per week. Staff.

HBHE 121 Health Promotion Practicum (3). Prerequisite, Health Education 120. This field placement in the Student Health Service will provide an opportunity to implement skills learned in Health Education 120. Nine laboratory hours a week. Staff.

HBHE 125 Injury as a Public Health Problem *(Maternal and Child Health o4)* (3). Prerequisite, EPID 160 or equivalent. This course considers the causes and consequences of traumatic injury within developmental, social and economic contexts, and dilemmas in injury prevention. Injuries associated with transportation, violence, and the home and occupational environments are included. Three lecture hours per week. Spring. Runyan, Kotch.

HBHE 133 Interpersonal and Group Relations (3). Permission of instructor. An experimental study of human relations with emphasis on analysis of interpersonal and group interaction, the effective use of intervention in group problem solving, leadership styles and team building, intergroup cooperation and conflict. Six hours a week forten weeks, fall and spring. Staff.

HBHE 140, 141, 142 Problems in Health Education (1 or more). Prerequisites to be arranged with the faculty in each individual case, depending upon the problem that is to be studied. A course for students of public health who wish to make an intensive study of some special problem in health education. Fall, spring, and summer. Staff.

HBHE 160 Introduction to Women's Health and Health Education *(Women's Studies 161)* (3). Permission of instructor. Provides an overview of women's health emphasizing their specific interests as family and community members, as patients, and as health professionals. Implications for health education practice and research will be discussed. Two lecture and two seminar hours a week, every other fall. Earp.

HBHE 164 Health Policy and Aging *(Health Policy and Administration 164)* (3). Critical examination of aging policy in light of empirical findings on the elderly's economic power. Utilization patterns, prevalence of dependency, and the cost-effectiveness of policy options, including long-term care. Three seminar hours a week. Mutran.

HBHE 172 Principles and Practice of Patient Education (3). Permission of instructor. Principles and practice of implementing, coordinating, and evaluating patient education programs. Two lecture hours a week. Research activity required for three-hour credit. Spring. Staff.

HBHE 180 Mental Health Promotion: Social and Behavioral Change Approaches (3). Permission of instructor. Critical review and evaluation of prevention/promotion programs addressing the mental health of individuals, families, networks, communities, and larger social units. Three lecture hours a week, spring. Staff.

HBHE 185 Topics in Worksite Health Promotion (3). An overview of critical scientific, political, economic, behavioral and other issues as they affect planning, conduct and evaluation of health promotion/risk reduction programs at the worksite. Spring. Staff.

HBHE 189 Adolescent Health *(MHCH 226, PHNU 226)* (3). Topics covered include the epidemiology of health problems, developmental issues, health services, and psycho/social influences on adolescent problem behaviors. Course material will be useful for research generation and practical application. Spring. Foshee.

HBHE 190 Psychosocial Aspects of Aging *(PHNU 190, HPAA 190)* (3). Permission of instructor. Psychosocial aspects of the aging process and of old age. The needs of the elderly and their reactions to agencies and programs for the aged. Two lecture and two seminar hours a week, spring. Mutran.

Department of Health Policy and Administration

Kerry E. Kilpatrick, *Chair*

HPAA 70 Introduction to Health Services Systems (3). Corequisite, HPAA 71. Permission of HPAA BSPH Program Director, except for HPAA and HBHE majors. An introduction to the current status, trends, practices and issues in the delivery of health services. Fall. Staff.

HPAA 71 Orientation to Health Service Organizations (1). Corequisite, HPAA 70. Permission of HPAA BSPH Program Director, except for HPAA and HBHE majors. Opportunities for those with limited exposure to health-related organizations to visit several operating agencies, as an approach to understanding the U.S. health system. Fall. Chavious.

HPAA 72 Writing for Health Administrators (3). Designed to teach clarity, conciseness, and effectiveness of statement. Memoranda, reports, proposals, letters. Required of HPAA undergraduates. Fall. Mengel.

HPAA 73 Management of Human Resources (3). Permission of instructor for non-HPAA majors. General introduction to the broad field of human resource management in health organizations in the U.S. Detailed treatment of selected topics with a view to help develop operational skills. Spring. Staff.

HPAA 75 Foundations of Health Care Financial Management (3). Prerequisite, BUSI 71. Permission of instructor for non-BSPH students. Basic methods and techniques in financial management of health care programs including financial statement analysis, cost determination and allocation, pricing of services and budgeting. Spring. Porto.

HPAA 83 Introduction to Health Organization Structure, Functions, and Design (3). Prerequisite, senior standing, or permission of instructor. Basic concepts of organization structure, functions, and design, and relevant administrative behavior, as applied to health and human services organizations. Spring. Files.

HPAA 85 Computers in Health Administration (3). Prerequisite, permission of instructor required for non-HPAA majors. The purpose of this course is to provide the student with a general introduction to the theory and to the major applications of computers, especially microcomputers. Fall, spring. Porto.

HPAA 91 Readings in Health Policy and Administration (3 - 6). For undergraduates enrolled in the department's bachelor's degree program. Permission of instructor required. Directed readings or research; written reports are required. Fall, spring, summer. Staff.

HPAA 97 Field Training in Health Policy and Administration I (3). The first six weeks of a supervised twelve-week administrative internship in a health care organization. Required of all BSPH students in HPAA. Summer. Staff.

HPAA 98 Field Training in Health Policy and Administration (1 - 6). Prerequisite, HPAA majors only. Orientation to health services organizations, under faculty supervision. Relevant to SPH course work in all majors; can contribute to development of acceptable plans for summer internships. Summer. Staff.

HPAA 99 Honors Research in Health Policy and Administration (6 - 9). Prerequisites, overall GPA 3.3 by end of junior year in all UNC-Chapel Hill courses, permission of department chairman. Readings and seminars for undergraduates who show potential and talent to do research. Students will carry out a special project and prepare an honors thesis based on the project. Fall, spring, summer. Staff.

HPAA 101 Information Management in Health Policy and Administration (1). Introduces students to methods for critically evaluating public health literature and using computers to identify, file, and retrieve information. Fall. Moore, White.

HPAA 102 Concepts of Health Administration (3). Survey of health and human services organization and management, including concepts of administrative systems, government, legal and public interest aspects, organizational behavior and relations. Spring. Allen.

HPAA 104 Issues in Managing Health Care Organizations (Var). Through presentations of leaders in the health care field and class discussion, problems, issues, and changes in health care policy and administration will be explored. Spring. Porto.

HPAA 105 Issues in Health Policy (3). Lectures on current topics in health policy. Spring. Staff.

HPAA 106 Issues in Health Care (1 - 2). Lectures on current topics in health care. Fall, spring. Staff.

HPAA 107 Theory and Practice of Public Health Policy and Administration (3). Policy and management issues and ideals, including their historical derivations and international implications, in relation to current state and local practice. Fall, spring. Staff.

HPAA 109 Concurrent Field Training in Health Policy and Administration (1 - 6). Supervised observation of service activities in health service organizations. Fall and spring. Staff.

HPAA 110 International and Comparative Health Administration (3). Prerequisite, permission of instructor. International career interests desirable. Study of various health problems and responsive program systems in different (more or less developed) countries, with a comparative framework, examining special experiences, general lessons, and possibilities for cooperation. Fall. Bender, Freymann.

HPAA 121 Hospital Organization and Administration (3). Comprehensive overview of general hospitals, including organizational structure, governance, medical staff, external relationships, departmental organization, strategic planning, financing regulation, accreditation, and quality assessment. Addressed from perspective of chief executive officer. Fall. Staff.

HPAA 122 Long Term Care Administration I (3). Introduction to administration of long term care facilities. Evolution of long term care and survey of the current field. Examination of state and national requirements. Spring. Allen.

HPAA 123 Long Term Care Administration II (3). Prerequisite, HPAA 122 or, permission of instructor. Nursing home care, organization monitoring, costs, and financing. Exploration of trends and issues such as cost controls, productivity, quality assurance, medical staffing, and organization. Fall. Allen.

HPAA 124 Aging and Human Development *(PHNU 124, HBHE 101, NUTR 124)* (3). Lectures concerned with biological, physical, emotional, demographic and social aspects of aging. Spring. Staff.

HPAA 127 Introduction to Dental Public Health (3). Prerequisite, permission of instructor required. Survey of the theory and practice of dental public health with an emphasis on basic knowledge and skills necessary for planning and evaluating dental public health programs. Fall, spring. Rozier, Bader, Graves.

HPAA 130 Organizational Design and Behavior of Health Institutions (3). Overview of organizational theory and empirical findings appropriate to the design and behavior of health care organizations. Topics include the design of the organization, its performance, and relationship to the environment. Spring. Kaluzny.

HPAA 138 Conflict Resolution and Negotiation for Managers (3). This course covers conflict management and dispute resolution in health care organizations. Listening skills, assertiveness, principled vs. positional bargaining, distributive and integrative bargaining, mediation, and handling inter-group conflict. Spring. Barry.

HPAA 139 Development of Personal Effectiveness (3). Prerequisite, permission of instructor. Based on the assumption that personal effectiveness depends on being able to think clearly, this course encourages development of rational thinking through understanding the relationship between thinking and feelings. Spring. Barry.

HPAA 140 Readings in Health Policy and Administration (1 - 6). Staff.

HPAA 141 Marketing for Not-For-Profit Organizations (3). Prerequisite, permission of instructor. Application of basic principles of marketing and marketing decision models to problems in health care, and other not-for-profit organizations. Spring. Parker.

HPAA 144 Some Quantitative Methods of Planning and Evaluation *(BIOS 124)* (3). Planning cycle, methods overview, data sources, PERT budgeting, health indices, measurement of goal fulfillment, achievement, efficiency, effectiveness, research designs, benefit cost analysis, probability, utility, and decision trees. Spring. Staff.

HPAA 145 Introduction to Strategic Planning and Marketing (3). Prerequisite, permission of instructor. An introduction to the philosophy, methods and models of strategic planning in health care systems. Related disciplines include marketing, management, organizations, systems, and decision analyses. Spring. Parker.

HPAA 155 Introduction to Management Information Systems in Health Care (3). Conceptual and practical aspects in the analysis, development, and utilization of computer-based information and control systems with emphasis on application to the health care environment. Spring. Schreiner.

HPAA 161 Strategies for Prevention (3). This course discusses the effects of public policies for prevention on rates of illness, injury, and premature death. Fall. Barry.

HPAA 163 Geriatric Health and Medical Care (3). Presents a comprehensive survey of geriatric health and medical care from a clinical and policy perspective. Spring. Staff.

HPAA 164 Health Policy and Aging *(HBHE 164)* (3). Critical examination of aging policy in light of empirical findings on the elderly's economic power. Utilization patterns, prevalence of dependency, and the cost-effectiveness of policy options, including long-term care. Fall. Staff.

HPAA 170 Economic Perspectives in Health Policy and Administration (3). Prerequisite, Economics 10, and permission of instructor. Introduction to health economics principles as applied to major sectors of U.S. healthcare delivery system. Spring. Kilpatrick, Thorpe.

HPAA 176 Introduction to Health Services Research (3). Prerequisites, MPH student. Provides systematic introduction to selected methods for health services research, literature, and research writing. Spring. Staff.

HPAA 180 Health Law (3). The law and the legal decision-making processes and their relationship to delivery of health services. Fall, spring. Staff.

HPAA 185 Ethical Issues (3). Nature of ethical thought and reasoning; contributions of religion and science; historical and current issues. Sections on professional practice issues and health policy issues. Fall. Allen.

Department of Nutrition

Steven H. Zeisel, *Chair*

NUTR 40 Introduction to Human Nutrition (3). Human nutrition and relationship to health and disease processes. Presented as an integrated body of knowledge derived from several disciplines. Functions and sources of human's food. The relevance of nutrition to individual well-being, social welfare and economic development. For undergraduates not intending to major in nutrition. Fall. Anderson.

NUTR 98 Undergraduate Research in Nutrition (3). For undergraduates enrolled in the department's bachelor degree program. Permission required from faculty research director. Directed readings or laboratory study on a selected topic. May be taken more than once. Fall, spring and summer. Staff.

NUTR 99 Honors Research in Nutrition (3). Permission required from faculty research director. Directed readings or laboratory study on a selected topic. Requires a written proposal to be submitted to and approved by BSPH Committee and faculty research director. A written report is required. May be taken more than once. Six laboratory hours per week. Fall, spring and summer. Staff.

NUTR 100 Introduction to Medical Nutrition (3). Prerequisites, CHEM 11, 21 and BIOL 11. Function of the human body focusing on nutrient interaction. Review of structure and function of cells and organs. For advanced undergraduates and graduate students needing to enhance background prior to NUTR 110. Spring. Switzer.

NUTR 110 Nutritional Biochemistry and Normal Cell Function (3). Prerequisites, NUTR 100, CHEM 11, 21, BIOL 11 or equivalent. Covers normal cell biochemistry and physiology, emphasizing roles of nutrients throughout the life cycle; chemistry and metabolism of proteins, nucleic acids, carbohydrates, lipids; endocrine/neuroendocrine regulation of metabolism. Fall. Louie.

NUTR 111 Nutrition for Children, Mothers, and the Elderly (3). Prerequisite, NUTR 100 or equivalent. Biologic bases for nutrient requirements and dietary recommendations as they vary throughout the life cycle. Covers the nutritional needs of women during childbearing years, infants, children, adolescents, and aging adults. Fall. Adair.

NUTR 120 Nutritional Biochemistry and Disease Processes (3). Prerequisite, NUTR 110. Covers biochemistry and pathophysiology of diseases with emphasis on roles of nutrients in prevention causation and/or therapy. Materials from prerequisite used as basis for study of molecular mechanisms responsible for disease processes. Spring. Anderson.

NUTR 121 Clinical Applications: Diet Therapy (3). Corequisite, NUTR 120. Course designed to examine the rationale and implementation of diet therapy and nutrition support in the prevention of treatment of disease. Spring. Barrett, Anderson.

NUTR 130 Food Ecology (2). Prerequisite, NUTR 40 or equivalent. Social, economic, cultural and psychological influences on food consumption patterns and food habits of individuals throughout the human life cycle are examined from a theoretical prospective. Fall. Kirkley.

NUTR 131 Food Ecology Applications (1). Pre- or corequisite, NUTR 130. Application of topics covered in NUTR 130 using the case study method. Fall. Kirkley.

NUTR 132 Dietary Change in Individuals (3). Prerequisite, NUTR 40 or equivalent. Functions of a nutritionist working with individuals, emphasizing interviewing, assessment, nutrition care planning, counseling, and service documentation in prevention and therapeutic situations. Practice in the use of current dietary analysis software programs and development of educational materials included. Spring. Barrett.

NUTR 140 Food Science and Processing (4). Prerequisite, NUTR 100. Introduction to foods important in the American Diet. Factors influencing selection, packaging, safety, and preparation of foods, menu planning and meal preparation. Three lecture and two laboratory hours per week. Laboratory fee $25. Fall. Barrett, Carroll.

NUTR 141 Food Service Systems Management (3). Prerequisites. Nonmajors require instructor's permission. Basic concepts of institutional food service systems management applied to small and medium-sized health care facilities in the community. Two lecture hours and two laboratory hours per week. Fall and spring. Chegash.

NUTR 150 Nutrition Policy and Programs (2). Prerequisite, NUTR 40. Introduction to program and policy approaches for improving nutritional status of populations. Broad basis and rationale for nutrition policy introduced. Design, implementation of relevant food, nutrition, health programs examined. Spring. Haines.

NUTR 170 Readings on Nutrition (Var.) Prerequisite, permission required. Reading and tutorial guidance in special areas of nutrition. Fall, spring, summer. Staff.

NUTR 190 Nutrition Research (Var.) Prerequisite, permission required. Individual arrangements with faculty for bachelors and masters students to participate in ongoing research. Fall, spring, summer. Staff.

Division of Continuing Education

Thomas L. McKeon, *Director*
Norman Loewenthal, *Senior Associate Director*
Lea Blanton, Associate *Director for Credit Programs*
Brick Oettinger, *Correctional Education*

The Division of Continuing Education is the University's arm for extending credit and noncredit instruction to North Carolinians who wish to further their education on a part-time basis or through short, intensive periods of study. The Division is housed in The **William and Ida Friday Continuing Education Center**, a modern facility designed to accommodate a variety of continuing education activities.

Through **Independent Studies,** students may complete degree-related correspondence courses under the direction of faculty members from UNC-Chapel Hill and seven other member institutions of The University of North Carolina system. **Continuing Studies** enables part-time students to enroll in undergraduate and graduate evening and daytime courses. **Off-Campus Credit Studies** provides classroom instruction in locations away from campus or in flexible time formats. The **Correctional Education** program enables qualified inmates in the North Carolina prison system to take correspondence courses and on-site classes, and provides assistance in transition to study release.

The office of **Conferences and Institutes** provides consultative and management services in developing continuing education programs in a variety of formats. A number of noncredit conferences and institutes are held at UNC-Chapel Hill each year, usually with the cosponsorship of a University school or department or an educational or professional organization. The Division sponsors the state office for **Elderhostel**, a program which enables persons over the age of 60 to spend a week on college campuses, taking courses and participating in enrichment activities. The **Developmental Disabilities Training** Institute provides training to persons working with mentally retarded and developmentally disabled individuals at the community and institutional levels.

Academic Procedures

Regulations and Requirements

The University does not recognize the regulations published in this Bulletin as valid beyond the academic year for which it is published. The faculty reserve the right to make any changes deemed necessary in the curricula and in regulations. Ordinarily, students may expect to receive a degree by fulfilling the requirements of a curriculum as specified in the Undergraduate Bulletin which was in force when they first entered the University. The University, however, is not strictly obligated to fulfill this expectation or to offer in any particular year a course listed in this bulletin.

Students are responsible for observing the procedures, regulations, and requirements of the University as they are set forth here and in other official University publications. This section describes many of the requirements and regulations that apply to undergraduates, but it is not a complete list of all such regulations and requirements.

Unless otherwise stated, the regulations described below will govern the academic progress of the students from their first year in the General College through their final semester in the College of Arts and Sciences or one of the undergraduate professional schools. The staff of the University will gladly provide students with detailed information concerning their program or academic problems, but this does not relieve any student of individual responsibility for meeting the University's requirements and observing University regulations.

Registration

General Information

Any student who has an unpaid account for the current semester or previous terms cannot be allowed to preregister or register for any term or semester until the account has been paid in full.

Students who register during Telephonic Registration Period I must pay tuition and fees or give notice of anticipated aid to the University Cashier by the published tuition and fees due date or their schedule will be cancelled and all their classes dropped before the beginning of classes. Students who register after Telephonic Registration Period I must pay estimated tuition and fees or give notice of anticipated aid to the University Cashier before they can register for that semester.

North Carolina law also requires that no person shall attend a college or university in North Carolina without presenting a certificate of immunization to the college or university, on or before the first day of matriculation, which indicates that the student has received immunizations required by law. New students must provide the Director of Student Health with an immunization record certified by a physician. Students who fail to present the required certificate of immunization within thirty days of enrollment will not be permitted to continue their enrollment at the University.

Students who register after the date designated for official registration must pay an additional fee of $10.00 for late registration. If the delay results from circumstances clearly beyond the student's control, an appeal may be made in writing to the Registrar, provided that the appeal shows sufficient justification for the delay to secure approval by the dean of the school in which the student is enrolled.

Registration for credit for any course at the start of the semester is limited to the first five days of instruction, unless a late registration is approved by the course's instructor and the student's dean or academic adviser. Registration changes which are limited to dropping courses may be effected by the student during the first ten days of instruction and must be in accordance with University requirements governing minimum academic hours of enrollment. After these deadlines, students must obtain an official drop/add form from their academic adviser with appropriate signatures as required by their dean. Any courses added after the first five days of instruction must also be approved by the teaching department, specifically course instructors.

To complete the registration process, students must be classified according to residence status (for tuition purposes), must obtain an identification card, and must complete any required physical examinations. Failure to fulfill these or other registration procedures will render the registration incomplete and subject to immediate termination.

Information submitted on admission and registration forms is instrumental in determining admission priority and academic status. False statements will be considered a violation of the University's Honor Code. Concealment of required information is falsification of the record.

A student must make application and register in his or her full legal name.

General College Students (freshmen and sophomores)

Each General College student is registered for classes by his or her General College adviser. New students will be notified, before their arrival in Chapel Hill, of their General College adviser's name and office number. They must report to their adviser at the appointed time in order to make course selections.

Juniors and Seniors

Students in one of the upper colleges must report to the office of the appropriate dean or department for assignment to a faculty adviser. The student's program of study is then arranged in consultation with this adviser, and officially approved. (In some curricula, the student's adviser will be on the staff of the dean's office, in which case the adviser will handle the entire registration process for the student.)

Cancellation of Course Registration

Students who register during Telephonic Registration Period I must pay tuition and fees or give notice of anticipated aid to the University Cashier by the published tuition and fees due date or their schedule will be cancelled and all their courses dropped before the beginning of classes.

After the semester begins, students' courses will be subject to cancellation by the University Cashier unless tuition, fees, and other obligations due the University have been paid.

A department (or curriculum) in the College of Arts and Sciences may cancel students' registrations in any courses offered in that department if registered students fail to attend both of the first two class meetings of the term during which the courses are offered. Students enrolled in courses that meet only once each week may have their registrations canceled if they do not attend both of the first class meetings. The deans in the General College and the College of Arts and Sciences will be responsible for informing departments of approved late-arrival students who cannot attend the first two class meetings because of illness or other reasons approved by a dean.

If such action is taken by a department, the registration openings resulting from these cancellations will be offered to other students seeking enrollment in the courses during the official drop/add period (first five days of classes) or thereafter, as determined by the instructor of the class or the department or school. Departments and academic advisers will inform students unable to gain enrollment in courses before the second class meeting that they may seek enrollment in departments and curricula where this policy may be administered.

It is important to understand procedures for dropping or adding classes. Departments are responsible for submitting a completed official drop/add form to the Registrar's Office (105 Hanes Hall) for all students whose registrations have been cancelled and for submitting the names and student identification numbers to the college in which the students are currently enrolled. The appropriate college will inform each student of the action taken and take necessary steps to insure that the student meets the minimum semester-hour enrollment allowed by the University. Students added to courses as a result of this policy must contact their academic adviser or dean to officially enroll in these courses.

Auditing of Courses

To audit a course, students must get written permission from the course instructor and from the department chairperson. Students can request this permission only after the end of the official registration period.

Full-time students cannot audit (1) courses in the Division of Continuing Studes, (2) a course in either Independent Study or Tutorial Programs through the Division of Continuing Studies, or (3) a course preparing the student for "Credit-By-Examination." Students usually audit lecture courses because they accommodate auditors more easily than other classes.

Students auditing a course do not write examinations or papers and do not participate in class discussions unless otherwise directed by the course instructor. They do not appear on the instructor's class roll and may not request grades. The Registrar's Office will not accept final grades for auditors.

Students officially registered for other courses during a semester or summer session may audit a course without paying a fee. Those not officially registered must pay a $10.00 fee to the University Cashier and must file a copy of the receipt with the course instructor at the beginning of the term.

Changes in Fall and Spring Semester Course Registration Schedules

Course Schedule Changes Before the End of the Sixth Week of Classes

Insofar as possible, changes in course registration schedules should be made during the first five days of instruction. During this time, students may add courses using telephonic registration (CAROLINE) if prior approval for registration in these courses was granted by their academic adviser.

After the first five days of classes, the addition of a course to a student's registration schedule requires the permission of the course instructor or the department concerned. Additionally, students must obtain from their academic adviser a completed and signed official Registration Drop/Add Form which must be submitted to the Registrar's Office (Hanes Hall) on the day of issuance. The addition of a course after the second week of classes is not recommended or normally possible unless the student has been attending the class.

During the first two weeks of classes, students may drop a course using telephonic registration (CAROLINE); however, they are responsible for insuring that any registration schedule changes do not result in less than a 12 academic hour semester registration (one-hour Physical Education Activity (PHYA) courses are not counted as academic hours). After the second and before the end of the sixth week of classes, students may drop courses only with the approval of their academic adviser or dean. If permission is granted, the academic adviser or dean will complete an official Registration Drop/Add Form which must be submitted by the student to the Registrar's Office (Hanes Hall) on the day of issuance. After the sixth week of classes, students must petition to drop courses through the dean's office of the school in which they are enrolled.

Course Schedule Changes After the Sixth Week of Classes
If a student drops the only course he or she is taking, this constitutes a withdrawal from the University. A student is not officially dropped from a course (or added to a course) unless the aforementioned procedures are completed. The notation of W (withdrawn passing) is not employed for course drops made before the end of the sixth week of classes.

Other Procedures
Students enrolled in a professional school should become acquainted with the specific procedures used for making official changes in their course registration schedules. General College and College of Arts and Sciences students must use the following procedures after the first five days of classes:

Students admitted to the General College as freshmen or sophomore transfers are required to maintain continuous enrollment in English 11 and 12 or 13 (English 10, 11 and 12, if applicable) until they have completed their Basic Skills English requirement. Any change in a student's registration schedule involving the dropping of English 10, 11, 12 or 13, at any time during the semester, must be approved by a General College dean.

To drop a course after the sixth week of classes, students must complete and submit a petition form to the Appeals Committee of their College or School. In the General College and the College of Arts and Sciences, these committees meet weekly to approve or deny requests from students after examining the evidence presented in each petition. Reasons for requesting a course drop after the sixth week of classes are serious illness, personal or family problems, financial problems requiring employment, or other serious problems that prevent students from meeting their academic responsibilities. Students must first discuss their reasons for requesting a course drop with their adviser (Steele Building).

The adviser provides the student with a standard form which requires statements from the student, the course instructor, and any pertinent documentation (statements from employers, physicians, etc.). The completed form must be submitted by the student to the appropriate person in the General College or College of Arts and Sciences as designated by the adviser. Submission of a petition does not assure that the request will be granted; therefore, students must continue to attend classes until informed of the committee's decision. Students are also responsible for contacting the person to whom the petition was submitted within seven (7) days after the committee meeting.

If a course drop is approved, the student must process an official Registration Drop/Add Form through the Registrar's Office. All drops approved by the committees appear with the notation of W (withdrawn passing) unless an exception is made. If a petition is denied, the student may submit a second petition with additional supporting evidence. The decision of the appeals committee considering a petition is final.

Students enrolled in professional schools should acquaint themselves with the appropriate appeals procedures.

Any student who ceases to attend a class without officially being dropped receives a temporary grade of AB or IN. A temporary grade of AB is computed as an F grade and is converted to a permanent F grade at the end of the next regularly scheduled semester (fall or spring) after the AB grade is awarded. A temporary grade of IN is computed as an F grade and is converted to a permanent F grade at the end of the first eight weeks of the next regularly scheduled semester (fall or spring) after the IN grade is awarded. An instructor may also report a grade of F/AB, which is computed as a permanent F grade upon assignment. A grade of F may be assigned instead of a temporary grade or an F/AB grade where a final examination is not required in the course. The conditions that apply to the assignment of temporary grades are described under Grading System.

Class Attendance

The following legislation by the Faculty Council gives each instructor the authority to prescribe attendance regulations for his or her classes:

"Regular class attendance is a student obligation, and a student is responsible for all the work, including tests and written work, of all class meetings. No right or privilege exists that permits a student to be absent from any given number of class meetings."

Instructors will keep attendance records in all cases. If a student misses three consecutive class meetings, or misses more classes than the instructor deems advisable, the instructor will report the facts to the student's academic dean for appropriate action.

The appearance of a student's name on the Infirmary List constitutes an excuse for the student for absences from classes during the period the student is in the infirmary. This list is circulated to all deans of colleges and schools having undergraduate students. In case of doubt the instructor may check with the office of the student's dean.

Students who are members of regularly organized and authorized University activities and who may be out of town taking part in some scheduled event are to be excused during the approved period of absence. Notification of such an absence must be sent by the responsible University official to the office of the student's dean where instructors may, should they be in doubt, consult the list.

Absences from class for valid reasons are excused only by the instructors. A student should present his or her explanation for any absences to the instructor at the next meeting of the class.

The University calendar does not recognize religious holidays. The faculty are encouraged to make reasonable accommodations for students requesting to miss class due to the observance of religious holidays.

Final Examinatons

Final written examinations are required in all courses. (Any exceptions to this rule are based on the special types of work done in the course, and must have the advance approval of the Provost.) A general schedule sets the time for each examination.

No examination (except for laboratory sections) may be held at a time other than that specified in the general schedule, and no examination time can be changed after it has been announced. No special preparation quizzes may be given during the last five days of classes before the beginning of the final examination period. No examination may be held later than 7:00 p.m. Final examinations for a full course should ordinarily cover two hours but should not exceed a period of three hours. Only examinations requiring an exceptional portion of practical work should be longer than three hours.

All regular final examinations must be held in Chapel Hill. In exceptional cases a student may apply to his or her dean for permission to take examinations in absentia. (A fee of $10.00 is charged for each examination so taken.)

Students who are absent from an examination receive a course grade of Absent (AB), which is equivalent to F. When students are unable, for reasons clearly beyond their control, to take a final examination at the scheduled time, they can be excused only by the Student Health Service or their academic dean.

A student who has three final examinations scheduled by the Registrar's Office within a twenty-four hour period may petition his or her dean for permission to have one of the scheduled examinations rescheduled. In the event that one of the scheduled examinations is a common final examination for a multiple-section course, that examination is the one to be rescheduled.

In all cases in which an examination is to be rescheduled, the instructor may reschedule that examination during the final examination period, but not later than the end of the following semester. Any petition for a change in the examination schedule because of this rule must be made before the first day of the final examinations. The final examination in any course may be taken only by regularly enrolled members of the class whose registration has been certified and by students certified to be eligible to take a special examination in that course. The certifying authority is the Registrar's Office.

Each student is required to sign a full and explicit pledge certifying that he or she has neither given nor received aid during the examination.

Credit by Examination

Enrolled students who have gained through independent study or experience knowledge of the content of courses offered by the University for undergraduate credit may, with the approval of the department and school or college involved, receive credit (without grade) for such courses by special examination. Such an examination must be taken before the beginning of the last semester or full summer session before graduation, and the approval of the department and school must be received at least thirty days before the examination is taken.

Academic Course Load

Fall and Spring Semesters

To meet the minimum graduation requirement of 120 academic hours in 8 semesters, students should average 15 hours each semester, exclusive of physical education activity courses. For freshmen, however, physical education activity courses, 4-hour foreign language and 4-hour laboratory science courses often account for course loads of 16 to 18 hours. Other students may not enroll in 18 academic hours during a semester unless they have earned at least a 2.0 grade point average the preceding semester and may not enroll in 19 or the maximum of 20 academic hours during a semester unless they have earned a 3.0 grade point average the preceding semester. Exceptions require the approval of the student's dean. Seniors meeting graduation requirements during their final semester in residence may enroll in 20 academic hours if they have a cumulative and preceding semester grade point average of 2.0.

The minimum course load for a single semester is 12 academic hours (one-hour physical education activities do not count as academic hours). Students may not go below the 12 academic hour minimum without permission of their dean. All students should discuss semester enrollment of fewer than 15 academic hours with their adviser because such enrollments necessitate (1) summer school, (2) correspondence, or (3) a heavier course load during a later semester.

Summer Sessions

Two 3-semester hour courses constitute the normal academic load for one summer session. Students with a 2.0 cumulative grade point average may enroll in a maximum of 9 hours during a summer session with the approval of their adviser or dean.

Grading System

Permanent Letter Grades

A letter grade and plus-minus system for evaluating academic performance is employed for all undergraduates. Each letter grade receives a numerical value (quality points) for the purpose of determining a student's grade point average for a semester's work and for averaging grades for all semesters' work to find a student's cumulative grade point average.

The letter grades and the quality points represented by each (as of August 24, 1978) are as follows:

A = 4.0	B+ = 3.3	C+ = 2.3	D+ = 1.3
A- =3.7	B = 3.0	C = 2.0	D = 1.0
	B- = 2.7	C - = 1.7	F = 0.0

To determine the grade point average for a semester's work, multiply the number of semester hours assigned to each course by the number of quality points received, add the quality points received for all courses, and divide by the number of semester hours attempted.

EXAMPLE: Fall Semester Course Registration

Course Registration	Final Course Grade	Semester Hours		Quality Points		Quality Points Earned
Course A	C +	3	x	2.3	=	6.9
Course B	B -	3	x	2.7	=	8.1
Course C	B	4	x	3.0	=	12.0
Course D	C -	3	x	1.7	=	5.1
Course E	A -	1	x	3.7	=	3.7
Course F	F	3	x	0.0	=	0.0
Course G	A	1	x	4.0	=	4.0

Total Semester Hours = 18 Total Quality Points Earned = 39.8

The Fall Semester Grade Point Average = 39.8 ÷ 18 = 2.211

Grades earned and semester hours attempted at other institutions are not included in the calculation of the University grade point average. Plus-minus grades earned prior to the 1978 Fall Semester are not assigned a particular numerical quality point value; the value of the basic letter grade A, B, C, or D alone is used in computing a grade point average.

Temporary Grades (IN and AB)

Students who do not complete all requirements in a course by the end of the semester receive a temporary grade of IN or AB in place of a permanent letter grade. Grades of IN and AB carry the force of an F grade (zero quality points) and are used in the computation of a semester and cumulative quality point average.

Students who do not complete the course requirements within a specified period of time are assigned permanent AB/F* or IN/F* on their academic transcripts by the Registrar's Office. Temporary grades, once assigned, are a matter of official record and are reflected on a student's academic transcript even after conversion to a permanent grade.

A. The grade of AB must be reported by the instructor for any student who did not take the final examination and who, by taking the final examination, could pass the course. If the student cannot pass the course regardless of a final examination performance, the grade F/AB must be reported by the instructor.

When submitting an AB, an instructor must enter the grade on the Instructor's Grade Report and must also complete a Temporary Grade Assignment form (supplied by the Registrar's Office). The purpose of this form is to establish a record of what arrangements, if any, have been made between student and instructor to clear the AB. Absence from a final examination may be officially excused only by the student's dean or the University Student Health Service. An absence may be excused for significant physical or emotional illness, or for serious personal or family problems.

1. Student Health Service. Students who are inpatients in the Infirmary during the time of their final examination(s) will have their names entered on the "Infirmary List" in some cases, outpatient treatment will also result in their names being entered on the Infirmary List. Students on the Infirmary List should obtain an "Official Permit" from the Registrar's Office before contacting their instructor about arrangements to take the final examination. If students are treated at the Infirmary but do not appear on the Infirmary List, they should see the dean of their college as soon as possible.
2. Academic Dean. If students know in advance that they must miss (a) final examination(s) because of illness or other serious problems, they should see the dean of the school in which they are enrolled before the final examination(s) is given. If this is not possible, they should see their dean as soon after the fact as possible.

Assuming that a student did not take a final examination(s) for one of the reasons previously cited (see I. Grade of AB), the dean will issue an official "Examination Excuse" which the student must present to the course instructor when arrangements are made for a suitable time to take the final examination. Documentation of a student's illness or problems may be required by the dean.

If a student presents an "Examination Excuse" or an "Official Permit" to an instructor or the instructor's chairman or dean, then a final examination must be given to the student. A grade of AB must be assigned to the student by the instructor. This AB grade translates to an F in computing the student's cumulative and semester grade point average, and later converts to an AB/F* unless the student arranges to take the final examination before the close of the next scheduled semester (fall or spring) after receiving the grade.

B. The grade IN may only be assigned by an instructor to a student who took the final examination in a course but did not complete some other course requirement such as signing the honor pledge and who, by virtue of

completing that missing work, might pass the course. An IN translates to an F in computing a student's cumulative and semester grade point average. Unless removed within eight weeks of the beginning of the regularly scheduled semester (fall or spring) following its assignment, an IN converts to an IN/F*.

When submitting an IN, an instructor must enter the grade on the Instructor's Grade Report and must also complete a Temporary Grade Assignment form supplied by the Registrar's Office. The purpose of this form is to establish a record of what arrangements, if any, have been made between student and instructor to clear the IN.

C. Important Rules and Procedures Pertaining to AB and IN Grades.

1. The decision to report an IN grade is solely the responsibility of the course instructor; however, a student may present proper justification for the instructor's consideration.
2. Temporary grades should be cleared by completion of the work outstanding, preferably no later than the start of the following semester. The deadline for clearing a temporary grade of AB is the end of the next regularly scheduled semester (fall or spring) after the AB grade is awarded. A temporary grade of IN must be cleared within the first eight weeks of the regularly scheduled semester (fall or spring) after the IN grade is awarded.
3. If students intend to remove IN or excused AB grades, they should not officially enroll in the course(s) during the next semester or summer session. If recommended by the course instructor, a student may attend a part of that instructor's section of the course or another instructor's section of the same course in which the temporary grade was awarded.

If a student enrolls in a course in which a temporary grade has been previously received, the second enrollment is taken as evidence that the student could not or is not permitted to remove the temporary grade. This results in the replacement of the temporary grade by IN/F* or AB/F* after the deadline for removing the temporary grade. The grade earned during the second enrollment is also reported on the student's academic transcript and is used along with the F grade in the computation of a cumulative grade point average.

Other Grades and Notations

A. A grade of PS (Pass) indicates a passing grade in a course taken "pass/fail." The rules governing the use of "pass/fail" are presented later in this section.

B. A notation of NR (No Report) automatically is recorded by the Registrar's Office if a course instructor does not submit a grade roll by the time grade reports are prepared. A NR notation is replaced by a grade on a student's academic transcript when the grade roll is submitted.

C. A notation of W (Withdrawn Passing) is entered in the grade column of students' academic transcripts if they are permitted to drop a course after the sixth week of classes. This notation is automatically entered unless the student's academic dean specifies otherwise. The symbol W is not employed in Summer School.

D. A notation of BE (By Exam) is entered in the grade column of students' academic transcripts if they are awarded credit for a course as a result of evaluation by examination. This is to be distinguished from any placement examination taken before enrollment in a course.

E. A notation of PL (Placement) - is entered in the grade column of students' academic transcripts if they are awarded credit for a course as a result of an evaluation which would ordinarily place them in a succeeding course. For example, credit for English 1 and 2 awarded on the basis of CEEB verbal test scores or Achievement Test Scores should be recorded in this manner.

Repeating Course Enrollments

Students who have received passing grades in courses may not enroll in the same courses at a later time without the written approval of their academic dean. If a student proceeds with such an enrollment without securing permission, any grade received beyond the initial enrollment may be administratively removed from the student's academic transcript.

A second enrollment in a course for which a student has received a grade less than C through a previous enrollment at the University will be approved in writing by an academic dean at the request of the student if any of the following apply:

A. the course is specifically required by the student's academic major and is a prerequisite to other courses required in the major;

B. at least a grade of C (2.00) must be earned in a course specifically required in the student's academic major in order to satisfy graduation requirements in the academic major;

C. several years have elapsed since a student's initial enrollment in a course and a current, satisfactory knowledge of the course material is either required or advisable. In some circumstances, permission may be granted to repeat a specific course regardless of the grade earned (C or higher) during the initial enrollment.

If a student is permitted to repeat a course in which a passing grade previously has been earned, no additional credit hours beyond the first enrollment will be counted toward the fulfillment of the University's minimum 120-academic hour graduation requirement. Grades and academic hours earned as a result of both enrollments, however, will be computed in the student's semester and cumulative grade point averages.

Certain University courses (e.g., Applied Music, Special Studies, Undergraduate Research, etc.) may be taken more than once for credit and are so designated under individual department course descriptions in the Undergraduate Bulletin. A particular Physical Education Activity (Phya) course may be taken repeatedly. However, a different level of the same course [elementary, intermediate (Y), and advanced (Z)] must be taken during each separate enrollment.

Grades Earned at Other Institutions

Grades earned and semester hours attempted at other institutions are not included in the computation of a grade point average at the University and may not be used to restore academic eligibility at the University.

Grade Protests

If students wish to protest a course grade, they must first attempt to resolve any disagreement with the course instructor. If they fail to reach a satisfactory resolution, they may appeal the grade in accordance with the following procedures. They may submit a written appeal with any relevant test papers, term papers, etc. to their academic dean not later than the last day of classes of the next succeeding semester.

The dean will refer their appeals to the administrative board of his/her school and the chairman of the department concerned. The department chairman will appoint a committee to consider the appeal and will make a recommendation to the admini-strative board based on the committee's findings. The decision of the administrative board in such cases is final.

Pass/Fail Option

The pass/fail option provides students an opportunity to enroll in an additional course (beyond the usual five-academic course load) or to reduce their concerns about competing with prospective majors in a course in which they have considerable interest.

Students who declare a course on the pass/fail option will receive the grade of PS (pass) for a letter grade of C - or higher, D (or D - , or F (fail). For the purpose of computing a grade point average, a PS grade does not count as hours attempted; therefore, a PS grade does not affect a student's grade point average. Grades of D - , D, and F under the pass/fail option count as hours attempted and are treated as D - , D, and F grades earned in any other course.

Course content and requirements are the same for pass/fail registrants as for regular registrants. The minimum performance for a PS grade is equivalent to the minimum performance for the letter grade C - .

Regulations Governing the Pass/Fail Option

The following regulations governing the use of the pass/fail option have been approved by the Faculty Council in April 1991:

A. Students must take at least nine academic hours for letter grade credit during the semester of the pass/fail declaration in order to declare a course on the PS/D/F grading system.

B. No more than four credit hours (e.g., one academic course and a physical education activity course) may be taken on the PS/D/F grading system during a single semester.

C. A maximum of 11 hours of pass/fail credit may be taken. [Pass/fail hours beyond the maximum 11 hours taken before Spring 1992 will be accepted.]

D. Up to seven pass/fail credit hours received in courses that have been approved for the assignment of only PS/D/F grades are exempted from the limitations specified above in B and C.

E. Pass/fail courses MAY NOT be taken on the pass/fail option:

1. English 10, 11, 12, 13, Mathematics 10, and all courses used to fulfill the General College basic skills requirement (English, mathematical sciences, and foreign language);
2. Courses used to fulfill General College or Arts and Sciences perspective requirements;
3. Courses taken in a student's major or minor department; (Students who change their academic major and have previously taken one or more courses required by the major on the pass/fail option may count one pass/fail course in the new major.)
4. Courses specifically required by the major; (An exception is granted to students pursuing a Bachelor of Science degree in the Division of Basic and Applied Sciences. These students may declare a foreign language course required by their degree program on the pass/fail option if the course is not used to satisfy the minimum General College basic skills requirement.)
5. Summer School courses;
6. Courses for which special enrollment permission must be obtained from the Honors Office (300 Steele Building); these are generally courses designated with the "HNRS" prefix or "H" suffix.

Physical Education activity courses MAY BE taken on the pass/fail option even if used to satisfy a graduation requirement.

Pass/Fail Declaration Procedure

To declare a course pass/fail, students must complete the Pass/Fail Course Registration form. It is obtained from their academic adviser or dean's office (General College and College of Arts and Sciences students must see their adviser in Steele Building). Students should always discuss the advisability of taking a course pass/fail with their adviser before committing themselves to a formal declaration.

The period for declaring pass/fail begins on the fifth day of classes of each semester and concludes at the end of

the sixth week of classes. Forms submitted after the sixth week of classes are not accepted, and pass/fail declarations, once submitted, cannot be changed.

Academic Eligibility

The University expects all students to study and perform to the best of their abilities. The eligibility standards listed below do not suggest acceptable academic performance, but rather minimum levels. Students failing to meet these standards are not making good use of their educational opportunities.

The standards indicated below are stated in terms of "good standing" (cumulative grade point average) and "satisfactory progress toward graduation" (cumulative academic semester hours passed).

Cumulative Academic Eligibility Standards

A student who enters the University after May 15, 1982 must meet the following minimum requirements:

A. a 1.50 cumulative grade point average and 24 academic semester hours (cumulative) to begin the third semester in residence;
B. a 1.75 cumulative grade point average and 51 academic semester hours (cumulative) to begin the fifth semester in residence;
C. a 1.90 cumulative grade point average and 78 academic semester hours (cumulative) to begin the seventh semester in residence;
D. a 2.00 cumulative grade point average and 105 academic semester hours (cumulative) to begin the ninth semester in residence.

Required physical education activities courses (Phya) do not count as academic semester hours.

Except for degree programs that require enrollment beyond a ninth semester, permission to enroll in a tenth semester or beyond must be secured in advance from the appropriate officials in the college or school in which the student is enrolled.

Semester hours completed at another institution, and in which grades of C have been earned, will be used in computing the total cumulative semester hours passed.

Certain procedures are required of students who wish to restore their academic eligibility. Information can be obtained from the student's academic adviser or dean.

Minimum Eligibility Standard for Any Semester

Students who do not earn at least a 1.00 grade point average and pass nine academic hours in any semester will be reviewed by the dean or appeals committee of the schools or colleges in which the students are enrolled to determine their academic eligibility.

Academic Warning Notification

An academic warning will be issued to students who are not making acceptable academic progress at the end of the first, third, fifth, and seventh semesters in residence. The notation ACADEMIC WARNING will appear on the student's grade slip, but will carry no academic penalty and will not be entered on the transcript or any other permanent record.

Students will receive an academic warning if after:

A. the first semester in residence they have not earned a 1.50 cumulative grade point average and passed 12 academic semester hours (cumulative) of course work;
B. the third semester in residence they have not earned a 1.75 cumulative grade point average and passed 36 academic semester hours (cumulative) of course work;
C. the fifth semester in residence they have not earned a 1.90 cumulative grade point average and passed 63 academic semester hours (cumulative) of course work;
D. the seventh semester in residence they have not earned a 2.00 cumulative grade point average and passed 90 academic semester hours (cumulative) of course work.

Exceptions

To be eligible to remain in the University, a student who first entered the University after May 15, 1974 but before May 15, 1982 must meet the following grade point average requirements:

A. a 1.50 GPA to begin the third semester of college work;
B. a 1.75 GPA to begin the fifth semester of college work;
C. a 1.90 GPA to begin the seventh or later semester of college work; (to be checked after the eighth).

Transfer students admitted to the University after May 15, 1983 will have their number of transfer semesters in residence and their academic eligibility determined acccording to the standards approved by the Faculty Council on March 18, 1983. However, transfer students admitted to the 1983 fall semester with three or more semesters in residence at another institution or the 1984 spring semester with four or more semesters in residence at another institution may follow the rules governing determination of semester in residence and academic eligibility in effect before May 15, 1983. These students should consult the Office of Undergraduate Admissions and the dean of their college or school.

Under exceptionally extenuating circumstances beyond the control of the student and upon the recommendation of the student's dean, an appeal from the foregoing eligibility requirements may be considered by the appropriate appeals committee. The committee's decision is final.

Academic Eligibility Standards for Transfer Students

(Approved by the Faculty Council on March 18, 1983)

Semesters in Residence Based on Credit Hours Transferred

Several academic procedures, including determination of academic eligibility, depend on semesters in residence. UNC-Chapel Hill accepts for academic credit some work completed at other colleges, including the University's Division of Continuing Studies (DCS). In determining student's semesters in residence, the following formula should be applied to academic semester hours (1 quarter hour = 2/3 semester hour) accepted by UNC-Chapel Hill from another college or from the DCS:

A. less than 12 semester hours transferred = 0 semesters in residence; at least 12 but less than 24 semester hours transferred = 1 semester in residence;
B. at least 24 but less than 36 semester hours transferred = 2 semesters in residence;
C. at least 36 but less than 51 semester hours transferred = 3 semesters in residence;
D. at least 51 but less than 66 semester hours transferred = 4 semesters in residence;

The student's dean should make the determination of semesters in residence for a student who is eligible to transfer at least 66 semester hours from another college or from the DCS.

Academic Eligibility Standards for Transfers from Division of Continuing Studies *(DCS)*

Students who transfer to UNC-Chapel Hill from the University's DCS must meet the same standards which apply to students who enroll as first semester freshmen at UNC-Chapel Hill in a fall semester. These standards govern cumulative academic eligibility, minimum academic eligibility for one semester, and notification of academic warning. However, in applying the standards to DCS transfers, the above formula should be used to determine semesters in residence (UNC- Chapel Hill semesters + DCS semesters transferred).

Academic Eligibility Standards for Other Transfer Students

The minimum eligibility standard for one semester applies to all students, including students who transfer from another college.

Students who transfer to UNC-Chapel Hill from another college will receive the notation ACADEMIC WARNING on their grade slips at the end of their first semester in residence in Chapel Hill unless they pass 12 academic hours (required physical education activities courses are not included) with a UNC-Chapel Hill grade point average at least as high as:

A. 1.50 if 1 semester in residence has been transferred to UNC-Chapel Hill; 1.75 if 2 semesters in residence have been transferred to UNC-Chapel Hill;
B. 1.75 if 3 semesters in residence have been transferred to UNC-Chapel Hill;
C. 1.90 if 4 semesters in residence have been transferred to UNC-Chapel Hill;
D. 1.90 if 5 semesters in residence have been transferred to UNC-Chapel Hill;
E. 2.00 if 6 or more semesters in residence have been transferred to UNC-Chapel Hill.

Students who transfer to UNC-Chapel Hill from another college will be declared academically ineligible to begin a third semester of study in Chapel Hill unless they have passed 24 academic hours of UNC-Chapel Hill work (required physical education activities courses are not included) with a UNC-Chapel Hill GPA at least as high as:

A. 1.50 if 1 semester in residence has been transferred to UNC-Chapel Hill;
B. 1.75 if 2 semesters in residence have been transferred to UNC-Chapel Hill;
C. 1.75 if 3 semesters in residence have been transferred to UNC-Chapel Hill;
D. 1.90 if 4 semesters in residence have been transferred to UNC-Chapel Hill;
E. 1.90 if 5 semesters in residence have been transferred to UNC-Chapel Hill;
F. 2.00 if 6 or more semesters in residence have been transferred to UNC-Chapel Hill.

Transfer students who remain academically eligible to begin a third semester in residence in Chapel Hill must thereafter meet the same standards which apply to students who enrolled at UNC-Chapel Hill as first semester freshmen in a fall semester. These standards govern cumulative academic eligibility, minimum eligibility for one semester, and issuance of academic warning. However, in applying these standards, semesters in residence should be interpreted as total semesters in residence (UNC-Chapel Hill semesters - transferred semesters) and GPA should be interpreted as cumulative UNC-Chapel Hill GPA.

Restoration of Academic Eligibility

The University reviews academic eligibility after students complete their second, fourth, sixth, and eighth semesters, and every semester after the eighth except in certain readmission cases. In some cases, academic review may be initiated at the end of the odd semester in residence.

Ineligibility is determined before students begin their third, fifth, and seventh semesters, before every semester after the eighth, and, in the special review cases, before the

beginning of each even semester in residence. Students who may be ineligible to return (fall and spring) will receive notification from their academic dean at their home address a few days after the final examination period. Grade reports, sent about the same time, will be stamped "INELIGIBILITY PENDING."

Students failing to meet (1) the minimum cumulative grade point average and (2) the minimum academic semester hours passed (the latter requirement applies only to students admitted after May 15, 1982) may attempt to retain or restore their academic eligibility by

A. taking courses in the Summer School at UNC-Chapel Hill;
B. taking courses through the Independent Study by Extension Program (correspondence) at UNC-Chapel Hill;
C. removing excused AB or IN grades.

Students satisfying the minimum cumulative grade point requirement, but failing to satisfy the requirement for cumulative semester hours passed, may use one or more of the above procedures in attempting to retain or restore academic eligibility. To satisfy the requirement for cumulative hours passed, students also may use semester hours of approved transfer credit (grade of C or higher) from another institution. Students wishing to use transfer credit for this purpose should obtain approval from the Admissions Office and their academic dean or adviser before enrolling in these courses.

Independent Study by Extension Courses

Students planning to restore academic eligibility through completion of one or more correspondence courses should be familiar with the following rules and recommendations that apply to time limits and course selection:

A. Students may enroll and begin correspondence work at any time during the year. They may be enrolled in a maximum of two courses at any one time. A correspondence course enrollment expires 13 months from the date of enrollment.
B. Students should allow at least three months for the completion of a correspondence course. The following policies govern the minimum time within which correspondence courses may be completed:
    1. The minimum time for completing an Independent Study by Extension course is four weeks from the date of enrollment.
    2. Students may not submit more than one-fifth of the total number of assignments in the course at one time.
    3. Students may not submit assignments more often than once every two weeks unless all assignments previously submitted have been graded and returned by the instructor.
    4. Examinations taken on the UNC-Chapel Hill campus must be scheduled at least one week prior to the examination date, and those to be taken elsewhere must be scheduled at least three weeks prior to the examination date.
    5. Examinations may not be scheduled unless two thirds of the assignments have been submitted and have been graded and returned by the instructor.
    6. Examinations may not be taken until all assignments have been submitted.
C. Only grades earned in Independent Study by Extension courses labeled UNC-Chapel Hill can be considered for restoration of academic eligibility. In order to avoid problems, students should clear their course selection(s) with their adviser or dean before enrolling in Independent Study by Extension.
D. The following policies apply to students seeking restoration of academic eligibility in the General College or in the College of Arts and Sciences, effective January 1, 1984.
    1. The College of Arts and Sciences and the General College will count toward restoration of undergraduate academic eligibility for a given semester only those Independent Study by Extension courses for which a final course grade has been recorded in the Extension Office by the last day of the official registration period of that semester.
    2. No professional school courses offered through Independent Study by Extension, except those which are explicitly required for professional school degrees, shall be used to restore undergraduate academic eligibility in the General College and in the College of Arts and Sciences. The professional schools are: Journalism and Mass Communication, Business, Education, and Division of Health Affairs programs. Students should consult their dean before enrolling in one or more professional school courses.

Grades earned at another institution, however, cannot be transferred. In addition, students should understand the following regulations concerning restoration of academic eligibility:

A. If students enroll at another institution for twelve or more semester hours per academic term (fall or spring) before applying for readmission to the University, those semesters will count as semesters in residence and will determine requirements for restoring academic eligibility.
B. Students who are academically ineligible or who have pending academic ineligibility because of their cumulative grade point average should NOT attend another institution if they intend to return to the University at some future date.
C. Students who are declared academically ineligible, who attend another institution (summer, fall, or spring), and

who apply for readmission must have at least a 2.0 (C) average in work at the other institution.

D. Academically ineligible students who have a housing assignment or a housing contract on file for the following semester should either notify the Housing Department at the University of their plans to seek continued admission by restoring their academic eligibility or cancel their application or contract.

Readmission

Students first entering the University after May 15, 1982, and withdrawing for any reason must meet the following requirements to be readmitted:

A. For readmission to a second semester in residence - a specific cumulative grade point average and a specific number of academic semester hours of coursework passed are not required. However, an academic warning will be issued if a student has less than a 1.50 cumulative grade point average and less than 12 academic semester hours (cumulative).

B. For readmission to a third semester in residence - a 1.50 cumulative grade point average and 24 academic semester hours passed (cumulative) are required.

C. For readmission to a fourth semester in residence - a 1.50 cumulative grade point average and 36 academic semester hours passed (cumulative) are required. An academic warning is issued if the student has less than a 1.75 cumulative grade point average and less than 36 academic semester hours (cumulative).

D. For readmission to a fifth semester in residence - a 1.75 cumulative grade point average and 51 academic semester hours passed (cumulative) are required.

E. For readmission to a sixth semester in residence - a 1.75 cumulative grade point average and 63 academic semester hours passed (cumulative) are required. An academic warning is issued if a student has less than a 1.90 cumulative grade point average and less than 63 academic semester hours (cumulative).

F. For readmission to a seventh semester in residence - a 1.90 cumulative grade point average and 78 academic semester hours passed (cumulative) are required.

G. For readmission to an eighth semester in residence - a 1.90 cumulative grade point average and 90 academic semester hours passed (cumulative) are required. An academic warning is issued if the student has less than a 2.00 cumulative grade point average and less than 90 academic semester hours passed (cumulative).

H. For readmission to a ninth semester in residence - a 2.00 cumulative grade point average and 105 academic semester hours passed (cumulative) are required.

Readmitted students receiving academic warnings should consult their academic dean about their status. Readmission will be blocked for any student unless prior tuition and other obligations due the University have been paid.

It should be carefully noted that the readmission requirements stated above are based on (1) the total number of academic terms in college, both here and in other institutions, and (2) the cumulative grade point average achieved on courses taken at the University without regard to grades earned elsewhere.

Also, a former student applying for readmission after attending another institution must have at least a 2.0 (C) average on all work taken and be eligible in all respects to return to other institutions attended since leaving the University.

Readmission is not automatic in any case. Each applicant is considered carefully in the light of all attendant circumstances, including enrollment limitations within the University. Application for readmission should be made as early as possible and in no case later than two weeks before the opening of the semester.

Students who have withdrawn from the University during a regular term (fall or spring) or who have been out because of academic ineligibility or for any other reason must apply to the Director of Undergraduate Admissions for readmission.

Nontraditional Readmission

Traditional undergraduate readmissions policy requires that former University students fulfill certain minimal University cumulative grade point average (and academic hours passed for students whose initial enrollment at the University occurred after May 15, 1985) requirements based on their total number of semesters in residence.

Although the traditional policy for readmission is the norm, the University recognizes that individuals can gain personal and intellectual maturity over a period of years. In such cases, the University may choose to evaluate applicants for readmission on the basis of their current academic promise rather than earlier academic performance.

Under this policy, the University will review applicants who have not been enrolled full-time in a formal educational program for at least five years and who by their special life experiences might be considered nontraditional applicants. Readmission to the General College or the College of Arts and Sciences under this policy requires the approval of the associate dean or appeals committee of the college. Readmission to a professional school under this policy requires the approval of the professional school to which the student is seeking readmission.

Advising and degree-granting bodies within the University will monitor the performances of all individuals admitted under this policy. This monitoring will provide up-to-date guidance and counseling, and insure that each person readmitted fulfills the requirements for continued enrollment as specified in the letter of readmission issued

by the Admissions Office. Students who fail to meet these requirements will not be permitted to continue their enrollment at the University and may not apply for nontraditional readmission to the University.

Student Leave Policy

Undergraduate students may receive leave-of-absence status upon application to, and approval by, the office of their dean. Such status will be granted to those students who take leave from The University of North Carolina at Chapel Hill for activity elsewhere which contributes to their academic program at the University. Examples include a study year abroad or other arrangements which bestow academic credit.

Upon being granted leave-of-absence status, students will be so designated by the Registrar's Office and will receive a packet of materials. They must submit the materials as instructed in order to be included in the housing lottery, to be considered for financial aid, and to be pre-registered for courses during the semester of their return.

Students must also notify the Office of Admissions and follow the procedures of that office so that reenrollment dates are noted and other data confirmed (e.g., whether residence status remains the same, that physical condition is adequate, and that no bills are outstanding). Failure to submit these materials by the dates designated will deprive returning students of inclusion in the lottery for housing, of consideration for financial aid, and of the right to pre-register, and it may also delay their registration at the time of return.

Withdrawal

Students withdrawing from the University should complete an official withdrawal through the appropriate University office (see A and B below) before the end of classes during a semester or summer session. An official withdrawal constitutes an honorable dismissal from the University and may facilitate readmission. Failure to withdraw officially results in the assignment of IN or AB course grades which are computed as F grades in establishing grade point averages and academic eligibility.

Medical Withdrawal

If a student decides to withdraw for reasons of illness, the student should contact the Student Health Service, whether the treatment was received there or elsewhere. If a medical withdrawal is authorized, the official withdrawal will be handled through the Office of the Director of the Student Health Service. A medical withdrawal is effected without grades and without a semester in residence.

Academic Withdrawal

If a student decides to withdraw for reasons other than illness, or if a medical withdrawal cannot be authorized, the student must contact the dean's office of the school in which he or she is enrolled. An official withdrawal involves the completion of an "Application for Withdrawal" form.

The student must obtain clearance signatures from course instructors and certain University offices, as determined by the dean's office, before the form is submitted. In determining an undergraduate student's eligibility for readmission the following conditions apply:

A. Students who officially withdraw from the University are awarded a semester in residence if their withdrawal is initiated before the end of classes during a fall or spring semester, and if it is accompanied by the recording of six or more academic hours of F grades for that semester's work.
B. Withdrawal from a summer session is not counted as a semester in residence. However, failing grades are recorded if the student is reported as below passing in more than one academic course. Students enrolled as summer session visitors must withdraw through the Office of the Director of the Summer School, Pettigrew Hall.

Retroactive Withdrawal

No retroactive withdrawal from a semester or summer session shall be approved for any reason, medical or otherwise, unless a written request for such action has been submitted within 72 hours of the end of the final examination period of that semester or summer session.

Appeals for exceptions on the basis of extraordinary circumstances must be addressed to the appeals committee of the administrative board of the college or school having jurisdiction over the student during the semester or summer session in question. The decision of that appeals committee is final.

If a student completes official withdrawal from a fall or spring semester, tuition and fees will be prorated over a period of nine weeks at a rate of one-tenth of the semester's bill after deduction of an administrative charge. The last date for credit on a student's financial account for withdrawal is nine weeks after registration. If a student completes official withdrawal from a summer session, tuition and fees will be prorated over a period of three weeks at a rate of one-fourth of the summer session's bill after deduction of an administrative charge.

If students withdraw from the University during a semester and they receive financial aid funds prior to the date of withdrawal, they may be expected to repay a portion of the funds to the aid program(s). The repayment will be calculated by the Office of Scholarships and Student Aid when the student is cleared by that office at the time of withdrawal.

Graduation

To qualify for an undergraduate degree, a student must successfully complete at least 120 semester hours, not including physical education activities courses (quantitative requirements are higher than this minimum in some Bachelor of Science degree curricula). Also, the student must have a 2.0 (C) average on all work attempted at The University of North Carolina at Chapel Hill.

The required 2.0 average must be earned in a total number of hours not to exceed 45 hours beyond the minimum graduation requirements for the degree being sought. A minimum of 45 hours of academic credit must be taken at UNC-Chapel Hill. At least 24 of the last 30 hours must be taken on the UNC-Chapel Hill campus. In the College of Arts and Sciences, at least 18 semester hours of work with grades of C or higher are required in the student's major, and at least half of the student's major must be completed in this University.

One semester before the expected date of graduation the student should file an application for a degree in the office of the dean. A student who has not filed an application for graduation on or before the announced deadlines for fall graduation and for spring graduation may not be included in the list of graduating seniors.

Students must pay tuition, fees, and other obligations owed the University before receiving a diploma.

Degrees With Distinction

To graduate "with Distinction" or "with Highest Distinction" one must have completed at least 45 academic hours at UNC-Chapel Hill and have obtained an overall grade point average of at least 3.5 and 3.8 respectively.

Transcripts of Record

A statement of official academic record includes all significant recorded information concerning the student's admission, classification, and scholarship. No partial or incomplete scholastic record will be given. If the student's scholarship has been such as to prevent his or her continuance in the University and eligibility has not been retained or restored, a plain statement of this fact will be included.

A statement of honorable dismissal will not be granted to students whose conduct and character would not entitle them to remain in the University. In every transcript full mention will be made of any probation, suspension, or other temporary restriction imposed for unsatisfactory conduct and still in force when the statement is made. The University does not release an official transcript unless tuition, fees, and other obligations due the University have been paid.

Students may inspect their academic records at the Registrar's Office, 105 Hanes Hall.

Interinstitutional Registration

A student regularly enrolled in a degree program at the University may enroll by interinstitutional registration for a course at Duke University, North Carolina Central University, North Carolina State University, The University of North Carolina at Charlotte, or The University of North Carolina at Greensboro under the following conditions:

A. Space must be available in the course.

B. The student's academic dean must certify (a) that the course is appropriate for the student's degree program, and (b) that an equivalent course is not available at this University during the same term.

Additional information, procedural instructions, and forms are available at the Registrar's Office, 105 Hanes Hall.

Division of Student Affairs

Donald A. Boulton, Ed.D., *Vice-Chancellor and Dean of Student Affairs*
Edith M. Wiggins, M.S.W., *Associate Vice-Chancellor and Associate Dean of Student Affairs*
Frederic W. Schroeder, Jr., M.S., *Assistant Vice-Chancellor for Student Affairs and Dean of Students*
Sherry B. Morrison, M.Ed., *Assistant to the Vice-Chancellor for Planning and Assessment*
Don L. Collins, M.Ed., *Assistant to Vice-Chancellor for Student Affairs and Director of Development and Marketing*

The importance of the classroom in the learning process is paramount at The University of North Carolina at Chapel Hill. **The Division of Student Affairs** provides many services and programs which encourage and support the learning that takes place beyond the classroom. These departments and programs aim to assist students in integrating the various aspects of their lives so as to promote learning, self-awareness, self-determination, and broadened perspectives on the world.

Student Affairs departments and programs afford students the opportunity to develop skills to improve performance both within and outside the classroom; to develop leadership skills; to find opportunities to serve fellow students and the community; to explore, plan, and prepare for a career; to plan for an active and rewarding life; and to develop a clear sense of self, improved interpersonal skills, and the ability to choose wisely.

Information on each of these departments and programs is presented below. Students are encouraged to explore the opportunities offered by the Division of Student Affairs throughout their University career, either directly through the respective departments or through the Office of the Vice-Chancellor.

The Office of the Vice-Chancellor (located in 102 Steele Building) coordinates the Division's programs and provides guidance and leadership for its departments. The Office also acts in a consulting role for faculty, administrators, and students who wish to raise issues which concern the University community, with a particular focus on student needs. Members of the Office of the Vice-Chancellor also serve on various University committees to represent the Division's several constituencies. The Vice-Chancellor advises the Student Congress and the Executive Branch of Student Government.

Attached to the Office of the Vice-Chancellor are three service programs: the N.C. Fellows/ Leadership Development Program, the Orientation Program, and Department of Disability Services.

The N.C. Fellows Program, founded in 1968, is a four-year program designed to support and accelerate the development of highly motivated undergraduates with exceptional leadership potential. The program is based on the premise that intelligent and motivated students often become leaders, and it seeks to develop in such students a strong sense of responsibility toward those whom they serve. The Fellows Program is one of three such programs in the state. Each spring semester all freshmen at UNC-Chapel Hill are invited to apply to the program. Written applications are screened and approximately 70 candidates are asked to participate in preliminary interviews. About 40 applicants are chosen to participate in final interviews; of these finalists, approximately 20 are selected to become N.C. Fellows.

Leadership Matters, is a program offered to leaders and members of the more than 300 officially recognized student organizations, for the purpose of enhancing the effectiveness of student organizations. Included in this program are leadership skills training workshops, monthly newsletters, peer and professional consultation services, and a resource center. Other leadership programs include an **Emerging Leaders Program** for sophomores, a **Delegates Program** for student organizations, a Womentoring Program for first year undergraduate women, and a **Peer Leadership Consultant Program.** Two academic courses are offered: **Dynamics of Effective Leadership** and **Advanced Leadership Seminar.** For more information about any of these programs, please contact the Office of N.C. Fellows/ Leadership Development, 01 Steele Bldg.

The **Orientation Office** is responsible for familiarizing new students with the University. The Orientation Office strives to lessen new students' anxiety and increase their confidence, and to make them comfortable within the University environment. The orientation program promotes a smooth transition to the new academic and physical environment, familiarizes new students with University procedures, and offers early social opportunities. The office administers orientation programs for all new freshmen, transfer students, and graduate and professional students. The programs are designed to address the specific needs and different concerns of these groups. The Orientation Office also coordinates freshman placement testing through the General College. The office relies heavily on student employees and volunteers to achieve its goals.

The University of North Carolina at Chapel Hill provides equal opportunity in higher education to academically qualified students with visual, hearing, physical, or learning disabilities. **The Department of Disability Services** will provide assistance to integrate disabled students into the University program.

Services are designed and developed on an individual needs basis. Students may elect to use any or all of the services appropriate to their needs, at no charge.

A visit to the campus before acceptance or matriculation also is recommended, at which time the applicant may meet with The Department of Disability Services personnel to discuss questions and special concerns, so as to better judge the campus in relation to his or her needs. Arrangements for visits may be obtained by writing to the Director for The Department of Disability Services, CB# 5100, Steele Building, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-5100, or by calling (919) 966-4041 (Voice/TDD).

The UNC-Chapel Hill **Sonja Haynes Stone Black Cultural Center** assists in the University's efforts to enhance the educational and cultural experiences of its black students, faculty, and staff, as well as to enhance appreciation of the Afro-American cultural experience by non-black members of the University community. As a focal point for black cultural expression, the Center's programs include sponsorship of artist-in-residence programs, contemporary and traditional African and Afro-American art displays, a special reading collection, recognition of the University's distinguished black alumni, a black culture lecture series, and cross-cultural communication workshops.

Campus Safety is emphasized by programs and services developed to provide the University community with up-to-date information about safety measures, support services, and education regarding sexual assault and other crimes. Several University agencies and student groups work together to meet the needs of the campus and have formed a comprehensive approach to dealing with the issues of personal safety. Campus security issues are coordinated by the Campus Security Committee, which published on behalf of the Chancellor in September 1992 the University's first Annual Security Report. Copies of the Report are widely available on campus.

The University Response Plan for Sexual Assault Victims provides support and consistent response to victims of sexual assault. The plan gives medical, counseling, law enforcement, academic assistance, and housing options to victims.

SAFE Escort and after-hours shuttle services are available for persons traveling across campus at night. A Campus Watch Program, under development by University Police, will provide security assistance in much the way as do Neighborhood Watch programs in many communities. University Police, with significant support from the University's Physical Plant and Student Government, regularly checks lighting and other security concerns on campus.

The Office of the Dean of Students, in cooperation with student organizations such as the Rape Action Project and local community agencies like the Orange County Rape Crisis Center, provides training and education to students on issues such as date rape, sexual harassment, and personal security. University Police also offers educational and informational programs, while regularly publishing campus crime statistics.

For information on University regulations on the use of firearms, and other weapons on campus, please refer to the appendix of this publication. The University's drug policy also is located in the appendix.

Departmental Programs and Services

The **University Counseling Center (UCC),** located in Nash Hall, offers a wide variety of counseling, educational, and testing services for undergraduate students. Services are available to help students with typical problems they confront both in and outside of class in the areas of personal, social, academic, and intellectual development. One of the Center's major goals is to help those students who wish to understand their learning difficulties, and improve their learning ability and study skills, as well as those who are experiencing personal problems adjusting to a large, complex, and demanding university. In working with students, the Center offers individual and group counseling, career testing, workshops, and a career exploration course. Services are provided free of charge, and on a strictly confidential basis. The Center houses a comprehensive career resource room which allows the exploring student quick access to information about different majors, educational programs, and careers.

University Career Services assists students who have identified their career direction. The Office provides information, career counseling, and career-related programs for underclassmen in order to help them learn about various careers and the best ways to prepare for them. A counselor is also available to help students seeking summer employment and internships.

Services for upperclassmen and graduate students include workshops on resumé-writing, interviewing, and job-seeking skills; resumé-referral to employers; individual counseling; on-campus interviewing; job vacancy notebooks; a credentials file for students in selected curricula, and an automated Job Hot-Line. Some services are limited to students in a UNC-Chapel Hill degree or certification program who are within two semesters of graduation.

Additional resources and programs include occupational and employer information, career panels, career and graduate/professional school fairs, and an automated alumni network service.

University Career Services is located in 211 Hanes Hall.

The **Student Health Service (SHSH) Hospital,** located in a facility in the northeastern corner of the medical center complex, has overall responsibility for the health care of all University students. Any student who has paid the student health fee for the current semester or summer session is eligible for health care at the SHSH. The fee covers the cost of all services provided by SHSH professionals, including

physicians, physician extenders, physical therapists, and mental health professionals. Laboratory and X-ray studies at SHSH require a nominal copayment.

Additional charges are made for after-hours care, inpatient rooms, drugs, miscellaneous supplies, and laboratory and X-ray studies which must be obtained from outside laboratories. Spouses not enrolled in the University as students become eligible by paying the student health fee at SHSH.

The SHSH provides a comprehensive program of health care delivery including general outpatient and inpatient medical care, a pharmacy, and specialized clinics in Allergy, Gynecology, Sports Medicine, and Mental Health. Additional services provided within SHS by specialists retained as consultants include the Orthopedics, Dermatology, Dysplasia, and Ear, Nose, and Throat Clinics. There is an additional charge for these services.

Preventive services include immunizations and those other preventive services normally offered in any community or public health service facility.

The Health Education staff provides programs in lifestyle self-care skills such as exercise, nutrition, weight control, chemical and substance abuse, and stress management. The Peer Drug and Alcohol Program provides counseling and education.

The Contraceptive Health Education Clinic (CHEC) offers presentations on contraception, sexually transmitted diseases (STDs), acquired immune deficiency syndrome (AIDS), and other sexual health issues on individual (by appointment) or group (by request) basis. Fight AIDS Through Education (FATE) is an AIDS education outreach program focusing on concise, concrete information about AIDS and encouraging the use of decision making skills imparted by this program. Student Health Service serves as a satellite HIV testing site for all students and faculty on the campus. Within the Health Education Section is a 24-hour Sexuality Hotline manned by peer sexuality educators.

The Wellness Resource Center is located in Woollen Gym and provides individual health assessment sessions plus scheduled group programs in health promotion.

SHSH Office hours are 9 a.m. to 4:30 p.m. Monday through Friday and 9 a.m. to noon on Saturday. Students are seen on an appointment basis. Correct numbers for the various clinics are in the phone directory. After regular office hours and on weekends, physician extenders are available for acute care with medical and psychiatric backup. In general, students should go to the SHSH first. Major problems may be referred to the UNC Hospitals Emergency Room. Students should be aware that these services are not covered by the student health fee.

Because the health fee does not cover hospitalization, surgery, and intensive care, it is strongly recommended that students have additional health insurance. The University has made arrangements with Blue Cross/Blue Shield to offer group health insurance coverage including major medical benefits to enrolled single and married students, their spouses, and children. For information, contact Hill, Chesson, and Associates (Insurance Brokers), P.O. Box 3666, Chapel Hill, NC 27514. Telephone (919) 967-5900.

North Carolina law requires all new students at the University to document immunization records or undergo vaccination. Failure to comply results in cancellation of registration thirty days after classes begin.

The **International Center,** located in the Frank Porter Graham Student Union, assists students and faculty from other countries with their adjustment to life in Chapel Hill. The Center advises individuals and University departments on regulatory matters pertaining to international students and faculty. Activities are offered which, in addition to helping international students benefit as much as possible from their stay here, also promote interaction between students from the United States and international students. The activities also encourage the University and local community to benefit from the presence of international students and faculty. Activities include a special orientation, the Host Family Program, the Campus Friends Program, lectures, discussions, and various cultural programs. The Class of '38 Summer Study Fellowships also are administered by the Center.

Since its founding in 1860, the **Campus Y** has been a starting point for the development of many programs responding to students' concerns. In particular, the Y serves as a bridge between the University and the local community, providing opportunities for cooperation in addressing the needs of both groups. Students participate in Y-sponsored committees, some of which engage in community outreach (such as the Big Buddy, Elderly Exchange, and Tutoring programs), while some are concerned with social issues (such as Human Rights Week and the Women's Forum). Other Y committees are involved in global action (such as Hunger Responsibility and the South African Scholarship Fund) or in fund-raising for the Y (e.g., the Foot Falls Road Race).

In addition to involvement in these and other committees (29 this year), the opportunity exists for students to serve on the Y Student Executive Committee, for which elections are held in the spring. All students are welcome to visit the Campus Y office (in Room 102 of the Campus Y Building) to learn about volunteer service and University, local, and global issues.

The **Carolina Union**, located in the Frank Porter Graham Student Union Building, is governed by a Board of Directors made up of students, faculty, and staff of the University. The Carolina Union's role on the campus is to bring the diverse members of the campus community together through the provision of services, conveniences, amenities, and programs.

The Carolina Union Activities Board, a student organization, plans and implements the many social, cultural, educational, and recreational programs for the campus. Composed of a president and chairpersons of committees (selected through open interviews in spring semester), the Carolina Union Activities Board provides valuable

experiences for the students involved. Students are welcome to join committees that create the many programs offered by the Activities Board.

The Frank Porter Graham Student Union building also houses the offices of major student organizations including Student Government, the Graduate and Professional Student Federation, the Black Student Movement, and Residence Hall Association. Several student media organizations reside in the building such as the *Black Ink*, the *Daily Tar Heel*, *The Phoenix*, *Cellar Door*, *Yackety Yack*, *WXYC*, and Student Television.

The Frank Porter Graham Student Union is the "living room of the campus." The Union provides convenient and comfortable lounge space, art galleries, a movie theater, bowling lanes, billiard tables, pinball and video games, big-screen TVs, food services, vending machines, and an information center and box office. The Box Office sells tickets to the yearly Carolina Union Performing Arts Series, which presents outstanding performers and performances in Memorial Hall. The Central Reservations Office serves recognized student organizations by scheduling meeting rooms in the Union and in other campus facilities.

The Carolina Union is the place to meet friends, to relax, to learn, to have fun, to get involved, and to just be—the place where the campus community comes together.

The Office of the Dean of Students (located in 01 Steele Building) is actively concerned with broad areas affecting student services and student involvement at the University. The staff operates as an advocate for student needs and as an information center for referrals and questions from throughout the University community. Among the staff's responsibilities is assisting the University in upholding its ideals of personal conduct - both academic and nonacademic - through educating members of the University community about the student judicial system and through overseeing the system's operation. Staff members advise the Judicial Branch of Student Government and design programs to address campus issues, such as harassment and assault prevention, education, and response. The office advises the three Greek systems affiliated with the University. The office also helps students, parents, and University staff with personal problems or crises involving students.

Student housing is an integral part of the University's educational program. The primary objective of the **Department of University Housing** is to provide a physical and psychological atmosphere conducive to the development of each student's personality and abilities. The Department of University Housing is a part of the Division of Student Affairs.

The Director of the Department works with a professional staff who manages housing contracts and assignments, business affairs, residence life, maintenance and operation, and student family housing. Nearly 300 people make up the Residence Hall staff, which includes full time Area Directors for each residential area, Assistant Area Directors, a student Resident Assistant for each floor or wing, desk assistants, and secretaries. Area Directors and Assistant Area Directors have overall responsibility for the residence halls, including overseeing physical operation of the building, managing services provided to residents, and supervising residence hall staffs.

Resident Assistants work closely with University students, acting as an important source of help and information to residents, facilitating residence hall activities, and helping to fairly enforce the rules and regulations necessary to provide conditions which will enhance residents' personal, social, and academic development. The housing department/support staff includes 150 tradespeople and housekeepers.

Student Family Housing. UNC-Chapel Hill owns and operates 306 one and two-bedroom apartments for married students. The apartments are conveniently located in Odum Village, one mile south of the center of campus.

To be eligible for Student Family Housing, either spouse must be a registered, full-time student. For more information about Student Family Housing write to: Department of University Housing, Assignments Office, CB# 5500, Carr Building, The University of North Carolina at Chapel Hill, NC 27599-5500

Student Activities

Extracurricular Involvement

Undergraduate students encounter many experiences outside the classroom which contribute to personal and skills development. Involvement in extracurricular activities is one such experience. Through meeting and working with others in extracurricular activities, students gain in self-understanding, develop relationships, establish personal values and beliefs, and further develop their abilities and intellect. Each year, approximately 300 extracurricular organizations are formed by students and recognized by the University. These organizations include academic groups, cultural and international, honorary and service societies, music and performance, publications and media, religious groups, social fraternities and sororities, sports and recreational activities, student government, and special interest organizations. This wide variety allows each student to select areas of particular interest, yet there are no limitations, as students may create new organizations if they have additional interests.

Opportunities also exist to gain leadership experience and skills by serving as officers of these organizations. Programmatic training in leadership development is offered to members of recognized organizations through the Office of N.C. Fellows/ Leadership Development in the Division of Student Affairs. There are also opportunities for involvement in community service and staff-related organizations on the campus, such as the Campus Y and the Carolina Union. Involvement in these organizations provides students with the potential for personal and skills development.

Students interested in learning more about how to get involved and about the opportunities available are encouraged to visit the Office of N.C. Fellows/Leadership Development at 01 Steele Building.

Recognition of Extracurricular Student Organizations

The University requires that extracurricular student organizations be officially recognized each academic year. This recognition process is designed to ensure that student organizations which are affiliated with the University do not discriminate on the basis of race, religion, national origin, handicap, age, veteran status, sex (or sexual orientation as defined by law). In addition, official recognition provides student groups with the following benefits: applying for use (through reservation) of specified University facilities, property, services, or equipment pursuant to the Facilities Use Policy; use of the University's name in the organization's title, so long as University sponsorship or endorsement is not implied or stated; the privilege of applying for funding from the Student Activity Fee which is legislatively apportioned by the Student Congress; and the assistance of University staff. Applications for official University recognition must be completed annually, in order to ensure that active students are aware of University policies and to provide staff with information concerning University-recognized student organizations.

Applications are available in the Office of N.C. Fellows/ Leadership Development, 01 Steele Building. All information in and attached to the application is considered public information upon the granting of recognition.

Student Judicial Governance

For over a century, students at The University of North Carolina at Chapel Hill have accepted responsibility for their own conduct and discipline in academic and nonacademic affairs. Although the specific expectations with regard to student behavior have varied over time, the faith in the individual student's ability to conduct himself or herself in an honorable fashion has not changed. The trust bestowed upon students has precluded the necessity of any extensive system for monitoring student behavior inside or outside the classroom. There is no need for active proctoring of exams by instructors, or for oppressive supervision of student life outside the classroom. The honor system has helped to cultivate the environment of relaxed pursuit of academic and social activities which is enjoyed by the whole University community.

With this trust comes also an added degree of responsibility for students at UNC-Chapel Hill to uphold the commitment to live by two codes of conduct. The Honor Code forbids lying, cheating, and stealing by students in any academic process. The Campus Code sets student expectations outside the classroom, by requiring students to conduct themselves in a manner that does not significantly impair the welfare or the educational opportunities of others. Both the faculty and the administration at UNC-Chapel Hill have approved as a body these two codes, and the two groups continue to play an integral role in the student judicial system.

Each student's acceptance of enrollment in the University presupposes his or her commitment to the Honor Code and to the Campus Code, and to the principles of self-regulation on which their continued viability rests.

The Honor Code

It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and to support the enforcement of the Honor Code, which

prohibits lying, cheating, or stealing when these actions involve academic processes or University, student, or academic personnel acting in an official capacity.

Mutual Responsibilities of the Faculty and Students
(excerpted from The Instrument of Student Judicial Governance)

Academic work is a joint enterprise involving faculty and students. Both have a fundamental investment in the enterprise and both must share responsibility for ensuring its integrity. In relation to the Honor Code, therefore, specific responsibilities of the faculty which parallel the responsibilities of the students have been formally adopted by the Faculty Council.

A. Responsibility of Students

1. To conduct all academic work within the letter and spirit of the Honor Code which prohibits the giving or receiving of unauthorized aid in all academic processes.
2. To consult with faculty and other sources to clarify the meaning of plagiarism; to learn the recognized techniques of proper attribution of sources used in the preparation of written work; and to identify allowable resource materials or aids to be used during examination or in completion of any graded work.
3. To sign a pledge on all graded academic work certifying that no unauthorized assistance has been received or given in the completion of the work.
4. To comply with faculty regulations designed to reduce the possibility of cheating - such as removing unauthorized materials or aids from the room and protecting one's own examination paper from view of others.
5. To maintain the confidentiality of examinations by divulging no information concerning an examination, directly or indirectly, to another student yet to write that same examination.
6. To report any instance in which reasonable grounds exist to believe that a student has given or received unauthorized aid in graded work. Such report should be made to the Office of the Student Attorney General or the Office of the Dean of Students.
7. To cooperate with the Office of the Student Attorney General and the defense counsel in the investigation and trial of any incident of alleged violation, including the giving of testimony when called upon. Nothing herein shall be construed to contravene a student's rights enumerated in Section V.A.2.b. of the Instrument.

B. Responsibility of Faculty

1. To inform students at the beginning of each course and at other appropriate times that the Honor Code, which prohibits giving or receiving unauthorized aid, is in effect. Where appropriate, a clear definition of plagiarism and a reminder of its consequences should be presented, and the extent of permissible collaboration among students in fulfilling academic requirements should be carefully explained.
2. To identify clearly in advance of any examination or other graded work the books, notes, or other materials or aids which may be used; to inform students that materials or aids other than those identified cannot be used; and to require unauthorized materials or aids to be taken from the room or otherwise made inaccessible before the work is undertaken.
3. To require each student on all written work to sign a pledge when appropriate that the student has neither given nor received unauthorized aid. Grades or other credit should not be awarded for unpledged work.
4. To take all reasonable steps consistent with existing physical classroom conditions - such as requiring students to sit in alternate seats - to reduce the possibility of cheating on graded work.
5 To exercise caution in the preparation, duplication, and security of examinations (including make-up examinations) to ensure that students cannot gain improper knowledge of their contents.
6. To avoid, when possible, reuse of instructor-prepared examinations, in whole or in part, unless they are placed on reserve in the Library or otherwise made available to all students.
7. To exercise proper security in the distribution and collection of examination papers; and to be present in the classroom during an examination when the instructor believes that his or her presence is warranted or when circumstances, in his or her opinion, make his or her presence necessary.
8. To report to the Office of the Student Attorney General or the Office of the Dean of Students any instance in which reasonable grounds exist to believe that a student has given or received unauthorized aid in graded work. When possible, consultation with the student should precede reporting. Private action as a sanction for academic cheating, including the assignment for disciplinary reasons of a failing grade in the course, is inconsistent with faculty policy and shall not be used in lieu of or in addition to a report of the incident.
9. To cooperate with the Office of the Student Attorney General and the defense counsel in the investigation and trial of any incident of alleged violation, including the giving of testimony when called upon.

The Campus Code

It shall be the further responsibility of every student to abide by the Campus Code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University community.

All nonacademic conduct that infringes upon the rights or welfare of others at the University is thus embodied in the Campus Code. Violations of the Campus Code are handled in the same manner as violations of the Honor Code.

Procedure for Reporting. Violations of either the Honor Code or Campus Code should be reported to the Student Attorney General (Room 207 Carolina Union 966-4084) or the Office of the Dean of Students (Room 01 Steele Building 966-4041). If practicable, the observer can request that the accused student turn himself in for the alleged violation within 24 hours before the matter is directly reported. Faculty members who have cause to turn in a student should handle the case in the same manner.

Other Information. Complete information on the Student Judicial System including the Code of Student Conduct, procedures of hearings, appeals, sanctions, and guaranteed student rights may be obtained in the Instrument of Student Judicial Governance which is provided to each entering student and is always available in the Student Attorney General's office and the Office of the Dean of Students.

Student Government

The By-Laws of the Board of Trustees of the University invest in the Chancellor of the University "the duty... to exercise full authority in the regulation of student conduct and in matters of student discipline..." At the same time the Chancellor may delegate, and has delegated, authority to exercise disciplinary and administrative functions in student life to agencies of Student Government. Thus, within the context of this delegated authority and responsibility, the student body at the University has for decades been self-governing.

Student Government at Carolina is over one hundred years old, and hundreds of students are involved in the various branches every year. From serving on the Board of Trustees to the appropriating of student fees, from instituting governmental service to enforcing the Honor Code, Student Government affects every day of student life.

The entire framework of Student Government's activities rests on its ability to maintain the foundation of administrator-student relations: The University should serve as an adviser - not as a supervisor to the student body. In order to enjoy this freedom, students at Carolina must be willing to take a certain amount of responsibility to develop their own lifestyles. Student Government serves to maintain this freedom and the advisory, not supervisory, relationship.

Almost from the University's beginnings in 1795, students shared in managing their own affairs. In the Dialectic and Philanthropic Debating Societies, the forerunner of the present Student Government was born. Every student at the University belonged to one or the other of these societies, and the organizations assumed responsibility for maintaining discipline.

In 1876 the Honor System officially ended all vestiges of the monitorial system; in 1904 a judicial body, the University Council, was established; in 1938 the Student Legislature was established; and in 1946 a written constitution was approved. In 1968 the coeducational Honor Court was formed out of the Men's Court and Women's Court to hear all Honor Code cases. The Instrument of Student Judicial Governance was ratified and put into operation in 1974.

Roughly patterned after the federal system of government with its three branches, Student Government at UNC-Chapel Hill consists of an executive branch, a legislative branch, and a judicial branch. Heading the executive branch is the President of the Student Body, assisted by the Vice-President, Executive Assistants, and the Treasurer. The President designs a Cabinet and committees to work in areas of student concern.

Listed below are student officers and organizations:

A. Executive Branch

1. Officers - President, Vice-President, Secretary, Treasurer, Executive Assistants, Elections Board Chair.
2. Examples of committees that address various areas of student concern:

Chancellor's Committees	Disability Services
Campus Liaison	Parking
Campus Security	Publicity
Chancellor's Committees	Housing
Education/Academic Affairs	

B. Judicial Branch

Undergraduate Court. This body maintains original jurisdiction with respect to all violations of the Code of Student Conduct except those in which another court may have specified jurisdiction.

Office of the Student Attorney General. The staff investigates alleged violations of the Code of Student Conduct and brings to trial those charges sufficiently supported by evidence; the staff also advises and assists students accused of violations.

University Hearing Board. This court has original jurisdiction in cases deemed inappropriate for hearing within another court and appelate jurisdiction with respect to cases appealed from other courts.

C. Legislative Branch

The Student Congress (SC). The legislative branch of Student Government is unicameral (one house), consisting of 29 representatives elected by the student body, with the President and the Treasurer of the Student Body serving as nonvoting ex officio members. The Speaker of the SC is elected from among the 29 representatives. Graduate and professional students and on- and off-campus undergraduates are proportionally represented in the Congress.

The Congress handles a vast amount of legislation and, as one of its primary responsibilities, prepares an appropriations budget. A predetermined amount, set by the Trustees, of fees paid by each student provides the source for the Student Government Budget.

The representatives are elected in the spring for one-year terms, and each member serves on one of three standing committees - Finance, Rules and Judiciary, and Student Affairs. A fourth committee, Ethics, is comprised of senior members of the Congress.

Facilities and Services

The University of North Carolina at Chapel Hill is determined to maintain physical and instructional facilities that respond to increased enrollments while remaining commensurate with the University's standards of academic excellence. Supplementary facilities and modern equipment have been added to older classrooms and laboratories, and new buildings have been constructed and new programs developed that aid the students' academic progress and enhance their total education. The following information describes the University's facilities and services.

The **North Carolina Botanical Garden,** located near the intersection of Manning Drive and Fordham Boulevard (15-501 Bypass) on the UNC-Chapel Hill campus, is a center for the study, display, interpretation, and conservation of plants and of the natural areas of which these plants are a part. The garden staff administers three properties: the 250-acre North Carolina Botanical Garden proper, the five-acre Coker Arboretum in the heart of the campus, and the 367-acre Mason Farm Biological Reserve. The garden has strong programs in native North Carolina plants and is the site of several garden collections, including the Mercer Reeves Hubbard Herb Garden, the Habitat Gardens, the Plant Families Garden, carnivorous plants, and aquatic plants.

The garden is an outdoor laboratory and museum that supports University teaching and research, but also offers a variety of opportunities for general education and quiet recreation, including display gardens, public classes, workshops and lectures, exhibits, and a system of nature trails. The garden has no admission charge and welcomes use by University students, faculty, and staff.

The **Library System**. The University's library system holds more than 3.85 million volumes, and is the twentieth largest in America and the second largest in the Southeastern United States. While undergraduates are welcome to use all of the various libraries in the system, the Robert B. House Undergraduate Library is specially designed to serve them. House Library contains a collection of 141,000 titles covering almost all subjects. It acquires multiple copies of heavily used books to make them more readily available.

In addition to such traditional services as the Reserve Reading Collection, the Undergraduate Library provides microcomputers for student use in a microcomputer laboratory, and films, videocassettes, compact discs, slides, and audio recordings in the Nonprint Collection. The Undergraduate Library also offers individualized term paper consultations.

The Walter Royal Davis Library is located just a short distance from the House Undergraduate Library. With its 3,000 seats, seven miles of books, and in-depth reference service, Davis is the main campus library. The Louis Round Wilson Library houses special collections such as the North Carolina, Southern Historical, and the Maps collections. In addition, a number of departmental and school libraries housed in buildings around campus support research in many disciplines with expert staff and specialized subject collections.

The **Ackland Art Museum,** on Columbia Street just south of Franklin Street, houses an internationally known collection of more than 12,000 works of art, ranging from ancient times to the present. The Museum is especially rich in European painting and sculpture of the Renaissance and Baroque periods and the nineteenth century, in Asian painting and sculpture, and in North Carolina folk art including wood carving, painting, and ceramics. The collections of old master and modern drawings and of nineteenth- and twentieth-century photography are among the most important in the Southeast. Groups of ten or more students may schedule tours of the Museum's collection by calling Carolyn Wood, University Educator: 966-5736 (voice) or 962-0837 (TDD).

Students with an interest in fine arts and public service are encouraged to become involved as volunteers at the Ackland. Volunteer docents, trained by the Museum staff, provide educational services to the University community, including gallery tours, lectures, and special programs organized in conjunction with temporary exhibitions.

Students also are encouraged to join the Museum's membership group, the Ackland Associates, at the student membership rate. Associates receive the Museum newsletter and are invited to a number of special events at the Ackland.

The **Research Laboratories of Anthropology** is one of the preeminent institutes for archaeological research in the South. Located on the first two floors of the Alumni Building, its facilities include laboratories, a library, a darkroom, microcomputers, and extensive collections of archaeological records and artifacts. These collections consist largely of materials excavated from North Carolina and adjacent states. They also contain ethnographic and archaeological specimens from Latin America, Europe, Africa, and Asia. Exhibits on North Carolina archaeology are maintained on the first floor of the Alumni Building and are open to the public during normal business hours.

This unit regularly holds public programs on archaeology for students and community members alike. It also provides numerous opportunities for undergraduates to participate in archaeological research. Students interested in archaeology are encouraged to visit the Laboratories.

The **Morehead Planetarium,** one of the largest planetariums in the United States, is located on the north end of the campus of the university. The Morehead Planetarium Building and grounds, complete with a 68-foot, domed Star Theater and Zeiss Model VI Star Projector, scientific exhibits and classrooms, 24-inch Cassegrain reflecting telescope and observation decks, Visitors' Center, art galleries, rose gardens, and massive sundial were built for students of all ages with all interests.

Public planetarium shows every evening at 7:30 and 8:30 and live sky shows narrated by planetarium staff members on Friday evenings at 7:30 teach the public about the lunar landings, UFOs, the travels of Voyager, black holes, the Big Bang, and more. Weekend matinees include children's shows. Many of the planetariums shows are completely original, written and produced on location at the Morehead. Wide angle films and laser shows are a few more specialties the Morehead Planetarium offers. Noncredit classes for adults and children, special courses for teachers, memberships for students, individuals, and families and public viewings of astronomical events keep the community involved in the planetarium's activities.

The Morehead Planetarium Building was a gift of John Motley Morehead III (1870-1965), class of 1891, whose mission of educating the community lives on. Since 1949, the Star Theater has been a giant classroom for students, teachers, school groups, senior citizens, youth groups and the general public. As the United States space program began, the Morehead was right there, providing training for U.S. astronauts from the Mercury program to the Apollo-Soyuz program.

The building houses special rooms for university functions, a 400-seat banquet hall, faculty meeting rooms and lounges and facilities for administration of Morehead Foundation programs.

University News Services is the official media relations agency of the University.

News Services' mission is to keep the people of North Carolina and the nation informed about the excellence of the University's education, research, and public service.

The News Services meets the University's media relations needs by:

- Writing, editing, and distributing news releases; advising the media of upcoming events; suggesting news and feature stories; and providing opinion columns and photographs on topics ranging from upcoming cultural events to the latest University research.
- Operating the Carolina Newsline, a toll-free service providing taped interviews and stories to N.C. radio stations.
- Responding to media requests for expert faculty sources, story ideas, and general information about the University.

News Services also counsels administrators, faculty, staff, and students about sound media relations practices.

Established in 1918, News Services is one of the oldest offices of its kind in the United States.

The **Office of Information Technology (OIT)** encompasses information processing, distribution, and presentation using computers, networks, video, and a variety of classroom media. For computer users, OIT supports mainframe, supercomputing, workstations, and microcomputing in networked and nonnetworked environments. OIT hardware includes an IBM 3090-170J running both MVS/ESA and VM/XA operating systems, a DEC VAX multiprocessor running the VMS operating system, a CONVEX supercomputer running ConvexOS (a Unix-based operating system), and access to a Cray Y-MP supercomputer at the North Carolina Supercomputing Center (NCSC) in Research Triangle Park. OIT also sponsors a variety of workstations for public evaluation.

Through networks and broadband cable, the University is linked to computers and other users worldwide, including national and international electronic mail (e-mail) services. OIT offers a wide range of system software from the sophisticated molecular modeling, genetic programs and other biostatistical applications to the more general graphics, data management, and text processing. For the microcomputer user, OIT supports ten networked microcomputing facilities across campus and in selected dorms offering DOS and Macintosh machines, printers, and a variety of software.

The *Info* system is a university data base containing information from the undergraduate catalog, directories for students, faculty and staff, and a full-service information system about the University and current events. *Info* may be accessed from personal computers equipped with communications software, or it may be viewed at several *Info* terminals around campus, including the libraries, Student Union, the Morehead Visitor Center, and other high-traffic areas.

OIT offers support to campus computer users, from questions about word processing and statistical analysis software to system upgrades for your personal microcomputer. A walk-in Mainframe Help Desk is located in the basement of Phillips Hall, and User Service staff also take questions over the telephone. Additionally, there is a Microcomputing Support Center in the House Undergraduate Library. Members of the University may take free courses on systems and software at the OIT Training Center in Hanes Hall.

OIT provides classroom computing, media, and video communications support to the campus. Computer Classrooms feature hands-on workstations for students and instructors, while Master and Media-Intensive Classrooms contain a wide range of computer and media equipment. OIT's teleclassrooms and videoconference facilities enable UNC-Chapel Hill to participate in live, two-way video classes and conferences with other North Carolina universities and research institutions connected to the CoNCert microwave network. In addition, OIT supports the campus video cable system and provides satellite uplink and downlink services.

Physical Education facilities include Woollen and Fetzer gymnasiums; Carmichael Auditorium, the Dean E. Smith Center, indoor and outdoor pools, Finley Golf Course, Boshamer Baseball Stadium, Kenan Stadium, Koury Natatorium, and many athletic fields and tennis courts.

Physical education and athletics play an important role in undergraduate activity. Formal courses in physical education are required of freshmen. Varsity teams compete with those of comparable institutions and sometimes achieve national rankings. Intramural teams are numerous, and competition among residence halls, fraternities, and sororities is spirited.

PlayMakers Repertory Company is a full season professional theatre - a member of the League of Resident Theatres, an association of nonprofit regional theatres - associated with the Department of Dramatic Art. Each year a number of guest directors, designers, playwrights, and professional actors are engaged to work with the resident company to produce from five to seven plays. These guest artists, together with faculty members and selected graduate students, participate in the company. The repertory of productions is varied, including classics, modern and contemporary plays, and new scripts.

Undergraduate students have the unique opportunity to work with resident and guest artists on a professional level in every aspect of the theatre: administration, stage management, box office, costumes, properties, set construction, lighting, assistant to the director, and acting (in appropriate roles). Auditions are held regularly for all productions with PlayMakers Repertory Company and with the Department of Dramatic Art and the Lab Theatre (the student-produced undergraduate theatre).

WUNC (FM) has been licensed to The University of North Carolina at Chapel Hill since 1952. In 1976 the station was recognized as a full-service public radio station by the Corporation for Public Broadcasting and became a member of National Public Radio. WUNC operates as a noncommercial educational station, partially supported by listener contributions, with 100,000 watts of power at 91.5 FM. The station offers educational and cultural programming as a public service to the community and provides training opportunities for students under the direction of its professional staff.

WXYC radio, at 89.3 FM, is licensed to the students of UNC-Chapel Hill and the Chapel Hill community. Founded in 1977, this alternative music station is run primarily by students, who make up almost 85 percent of the approximately 130 people involved in the station's operation. Block programming at WXYC is limited, with an emphasis instead on an eclectic mix of musical offerings. One third of the music is less than two months old (including music from local bands), and the rest is drawn from the last 50 years, including rock, jazz, blues, reggae, and folk.

The emphasis is on variety and a balanced mix of the familiar, new, and unusual. DJs at the station are knowledgeable about the history of alternative music and about current directions. WXYC is located in Room 234 of the Frank Porter Graham Student Union.

Cultural and Religious Activities

The **Department of Music** sponsors concerts on Tuesday evenings and Sunday afternoons and evenings that feature performances by faculty, guest artists, and student ensembles. General student recitals occur on Wednesdays at 4 p.m. and degree recitals are given by students throughout the year at times to be announced.

Special events include the Annual Jazz Festival, Meet-the- Composer concerts, and lectures by visiting scholars. The Ensemble Courant, a professional ensemble that performs on original instruments, is based in the Department and each year presents a subscription series on campus. Students are encouraged to participate in the Department's many musical ensembles and activities.

The **Department of English** sponsors a year-long program of public lectures and readings by students, teachers, and local writers. There are frequent public lectures and readings by visiting scholars and writers. When new books are published by local writers, receptions, and autograph parties are held in the Student Bookstore.

The **Carolina Symposium and the Fine Arts Festival**, held in alternating years, provide extensive exploration of topics of interest to the University and to the region. Distinguished speakers, panel discussions, and exhibitions are featured. The programs draw on both local and national resources, and are planned and presented by committees composed of students and faculty and sponsored by contributions from various student groups, student government, the University administration, and other sources.

The **UNC Debate Program** of the Department of Speech Communication is open to all undergraduate students interested in competition in intercollegiate debate. Students prepare to debate both sides of a policy resolution, which stays the same all year, and compete as two-person units.

Campus Ministers Association

Baptist Campus Ministry 203 Battle Lane Robert M. Phillips	942-4266
Black Interdenominational Student Association (BISA) 214 Pittsboro Street W. Jo Watson	942-2152
Campus Advance Mike Barnes	929-0437
Campus Christian Fellowship Church of Christ/Christian Church 204 Glenburnie St. Frank Dodson	942-8952
Campus Crusade for Christ Hugh Jones	968-3693
Episcopal Campus Ministry Chapel of the Cross 304 E. Franklin St. Stephen Stanley	929-2193
Hillel Foundation 210 W. Cameron Ave. Rabbi Frank Fischer	942-4057
Inter-Varsity Christian Fellowship 2216 Pathway Drive Rich Henderson	967-4410
Lutheran Campus Ministry 300 E. Rosemary St. Larry Hartsell	942-2677
Newman Center (Roman Catholic) 218 Pittsboro St. Margaret Harig	942-2677
Presbyterian Campus Ministry P.O. Box 509 Rebecca Reyes	967-2311
Tarheel Christian Fellowship David Whitehead	544-6304
Wesley Foundation/United Methodist 214 Pittsboro St. Manuel Wortman	942-2152

Finances and Financial Aid

Student Finances

Living Expenses

The estimated expenses for an academic year (two semesters) are approximately $6,744.20 for an in-state and $13,328.20 for an out-of-state student. These expenses are listed separately below.

Tuition and fees are assessed on a semester basis and are due prior to registration. Accounts not paid in full by the bill due date are subject to cancellation of registration. Payments may be made in advance in person or by mail. To avoid the inconvenience of standing in line to make a payment, please mail your check (payable to the University of North Carolina at Chapel Hill), Mastercard, or Visa payment to the University Cashier, CB#1400, 103 Bynum Hall, UNC-Chapel Hill, Chapel Hill, NC 27599-1400. Show your full name and student ID number on all payments. The University does not release an official transcript unless tuition, fees, and other obligations due the University have been paid.

Room rent is payable in advance for each semester. There is a minimum board plan of $100.00 per semester for students living in University residence halls.

The estimated expenses for an undergraduate student for an academic year include:

	N.C. Resident	Nonresident
Tuition	$ 822.00	$ 7406.00
Fees	462.20	462.20
Books and Supplies	450.00	450.00
Dormitory Room Rent (Average double room)	1,880.00	1,880.00
Meals (Approximately)	2,070.00	2,070.00
Personal Expenses (Approximately)	1,060.00	1,060.00
TOTAL	$6,744.20	$13,328.20

Required Student Fees include Student Health Service, Athletic Association, Student Union, Student Activity, Student Recreation Center, and Student Services Facility - Debt Retirement, Telephonic Registration and Transportation Fee. All new students are required to pay in addition an Orientation Fee (Freshmen, $20.00, Junior Transfer Students, $12.00) and an ID Card Fee ($5.00) for their initial semester.

In addition to the above fees, special lab and course fees may be charged as follows:

American Studies - $25.00 for AMST 60.

Art - $15.00 each for ART 2, 4, 18, and 48.
- $20.00 each for ART 13, 16A, 17B, 46A, 47B, 66A, 67B, 86A, 87B, 106A, 107B, 126A, 127B, 156A, 157B, 176A, and 177B.
- $25.00 each for ART 16B, 17A, 17C, 46B, 47A, 47C, 66B, 67A, 67C, 86B, 87A, 87C, 101, 102, 106B, 107A, 107C, 126B, 127A, 127C, 156B, 157A, 157C, 176B, 177A, and 177C.

Astronomy - $30.00 for ASTR 31L.
- $45.00 for ASTR 137.

Biology - $30.00 for BIOL 54.
- $45.00 each for BIOL 11L, 41, 43, 47, 51, 62L, 63L, 72L, 73L, 80L, 101, 103, 104L, 105, 106, 108L, 109, 111, 113, 114L, 118, 120L, 129, 134L, 142, 147, 148L, 149L, 152, 153, 156, 163, 171, 176L, 181, 185L, 186L, 218, 220L, and 224.

Business Administration - $20.00 each for BUSI 72, 130, 160, 163, 170, 171, 172, 180, 235, 237, 243, 248A, 248B, and 249.
- $25.00 each for BUSI 24, 96, 96G, 96M, 133, 137, 182, 192, 199, 282, and 286,
- $30.00 each for BUSI 242B and 272.,$50.00 each for BUSI 190, 200, 201, 208, 240, 245, 260, 280, 295, 297, and 299-E.

Chemistry - $20.00 each for CHEM 99, 188, 341, 351, 361, and 381.
- $50.00 each for CHEM 11L, 21L, 25L, 41L, 62L, 124L, 136L, 141L, 142L, 170L, 171L, 181L, and 182L.

Clinical Laboratory Science - $15.00 for CLSC 52.
- $45.00 each for CLSC 71, 82, 84, 85, and 88.

Computer Science - $5.00 each for COMP 321, 322, 323, and 324.
- $10.00 each for COMP 212, 213, 214, 216, 217, and 290 (1.5). $20.00 each for COMP 4, 14, 15, 104, 105, 110, 112, 114, 120, 121, 122, 145, 151, 171, 172, 181, 228, 230, 236, 238, 239, 240, 241, 242, 243, 244, 245, 246, 248, 252, 254, 255, 257, 261, 265, 267, 268, 269, 282, 290 (3.0), and 291.

Drama - $20.00 each for DRAM 15 and 16

English - $20.00 each for ENGL 42 and 298.

French - $10.00 each for FREN 1, 1A, 2, 2X, 3, and 4.

Geography - $20.00 each for GEOG 171 and 172.

Geology - $20.00 each for GEOL 11L, 41, 42, 52, 53, 56, 57, 58, 120,133, 142L, 173, 221, 225, 227, 228, 246, 264, 265, 272, and 281.

German - $10.00 each for GERM 1, 1A, 2, 2A, 3, and 4.

Information and Library Science - $20.00 for 101,
- $30.00 each for INLS 151, 222, 225, 227, and 251,
- $40.00 for INLS158,
- $50.00 for INLS 102.

Italian - $10.00 each for ITAL 1, 2, and 3.

Journalism and Mass Communication - $25.00 each for JOMC 53, 57, 85, 157, 172, 178, 179, and 251,
- $40.00 for JOMC 191.100.

Music - Music Fees are charged separately by the **Music Department.**
Nursing - $ 20.00 for NURS 277
- $166.0 each ($35.00 - $131.00) for NURS 53, 65, 78, 82, and 84 (per semester)
- $15.00 each for NURS 50 and 69 (per summer term)

Occupational Therapy - $25.00 each for OCCT 320A and 320B
- $40.00 for OCCT 212
- $45.00 for OCCT 230.

Operations Research - $20.00 each for OR 181, 211, and 233.
Pharmacy - $15.00 for PHPR 194
- $25.00 for PHPR 72L
- $25.00 for PHAD 90
- $100.00 each for PHPR 92L (fifth year students) and 92A-L.

Physical Education, Exercise and Sport Science - $25.00 for PHYA 7.
Physical Therapy - $10.00 each for PHYT 68, 78, 88, and 98 (98A and 98B).,
- $15.00 each for PHYT 70, 80, and 84
- $18.00 each for PHYT 172 and 272
- $20.00 for PHYT 210
- $25.00 for PHYT 291.

Physics - $35.00 each for PHYS 20, 24L, 25L, 26, 26A, 27, 27A, 28L, 41, and 61,
- $45.00 each for PHYS 101, 102, 141, 142, 143, 148, 149L, 181, and 182.

Planning, City & Regional - $20.00 each for, PLAN 130 and 131.
Political Science - $200.00 each for POLI 217 and, 218 (MPA students).
Portuguese - $10.00 each for PORT 1, 2, and 3.
Psychology - $20.00 each for PSYC 50, 99A, 99B, 282, and 283.
Public Health

BIOS 191, $25.00
ENVR 164, $175.00
ENVR 165, $200.00
HBHE 90, $100.00
HBHE 240, $450.00
HBHE 340, $125.00
HBHE 341, $125.00
HBHE 342, $125.00
HBHE 343, $125.00
HPAA 98, $200.00
HPAA 209, $450.00
MHCH 214, $350.00
NUTR 140, $25.00
NUTR 220, $450.00
NUTR 252, $450.00
NUTR 253, $50.00
PHNU 196, $150.00
PHNU 272, $450.00
PHNU 301, $150.00
PHNU 396, $450.00

Radio, Television, and Motion Pictures
- $15.00 for RTVM 77,
- $25.00 for RTVM 177,
- $95.00 for RTVM 187.

Radiologic Science - $15.00 each for RADI 61, 62, 63, 71, 72, 73, 83, 93, and 162.
Rehabilitation Counseling - $20.00 each for RHAB 214 and 306.
Social Work - $250.00 each for SOWO 220 and 221,
- $260.00 each for SOWO 222 and 223.

Sociology - $20.00 each for SOCI 209, 211, 212, 213, and 317.
Spanish - $10.00 each for SPAN 1, 1A, 2, 2X, 3, and 4.
Speech Communication - $5.00 each for SPCH143, 145, 146, and 147. $10.00 for SPCH 141.
Speech & Hearing Science - $20.00 each for, SPHS 304 and 306.
Statistics - $20.00 each for STAT 101, 102, and 105.
Fees Applicable to New Students Only:
ID Card Fee - $5.00
Late Payment Fee - $10.00; **Returned Check Fee** - $15.00; **Late Registration Fee** - $10.00.

Each student is responsible for payment of his or her University bills. If someone other than the student is responsible for paying the bill, the University Cashier should be notified well in advance so that a bill may be sent to the proper person or agency in order that payments can be made when due.

Students who are expecting to receive financial aid or scholarship funds should bring with them sufficient funds (cash or traveler's checks) to take care of living expenses for approximately fifteen days. This should provide sufficient time for financial aid or scholarship funds to be made available.

The last day to reduce a course load for credit on a student's financial account is two weeks from the first day of classes for each semester. Dropping the only course requires official withdrawal.

In case of withdrawal from the University, tuition and fees will be prorated over a period of nine weeks at a rate of one-tenth of the semester's bill after deduction of a $25.00 administrative charge. The last date for credit on a student's financial account for withdrawal is nine weeks after registration. Withdrawal credit cannot be refunded until one week after the withdrawal has been posted to the student's account.

Banking Arrangements

Before coming to Chapel Hill, students should carefully consider plans for handling their financial affairs. It is strongly recommended that each student open a bank account at a local bank. This may make banking matters more convenient.

Local banks are eager to serve students. However, because of the transient nature of the student population, banks may be hesitant about cashing checks drawn on out-of-town banks.

Statutory Provisions Offering Lower Tuition Rates

Legal residents of North Carolina who meet the requirements of N.C. Gen. Stat. 116 - 143.1 are entitled to pay a lower rate of tuition than non-residents. Members of the armed services, and their qualifying dependent relatives, who are not North Carolina legal residents may be allowed to pay tuition at less than the nonresident rate if they meet the requirements of N.C. Gen. Stat. 116 - 143.3 All students are responsible for being aware of the requirements concerning residence status. A full summary of information on these two provisions is set out in the Appendix.

Residence Hall Room Rent

Prior to the beginning of fall semester, the Housing Department will accept application-contracts on a two-semester basis only. A $75.00 pre-payment must accompany all applications for housing; $25.00 of this pre-payment applies to fall rent and the remainder to spring rent.

The room rent for the first semester a student will be enrolled in the University is due by a specified date several months in advance of his or her actual enrollment. There is a minimum board plan of $100.00 per semester for all students living in University residence halls. Most scholarships, grants, and loans which have been approved for students may not be used to meet these payments, as such funds cannot be made available to students for use before actual enrollment in Chapel Hill for the first semester. An exception to this policy is made when aid is administered through the UNC-Chapel Hill Office of Scholarships and Student Aid. That office can then issue a deferment card for the housing prepayment.

Questions should be addressed to the Department of University Housing, CB# 5500, Carr Building, UNC-Chapel Hill, Chapel Hill, NC 27599-5500.

Student Financial Aid

The University of North Carolina at Chapel Hill offers a comprehensive program of student financial aid to ensure that no qualified student will be denied the opportunity for a University education because of a lack of financial resources. The Office of Scholarships and Student Aid awards and administers over $30 million in financial aid to more than 7,200 students. Assistance is available to students who have financial need and are in good standing and are making satisfactory academic progress in the University.

In determining a student's eligibility for financial aid, the Office of Scholarships and Student Aid follows standard need analysis guidelines, used nationally by schools and financial aid programs, to measure the ability of a student and his or her family to contribute to educational expenses. The family is expected to assist the student as much as they are able, and the student usually meets a portion of costs with savings from summer work and from other available resources. A student's financial need is the difference between the costs of attending UNC-Chapel Hill and the amount the student and family together should be able to pay toward these costs. The Office of Scholarships and Student Aid makes every effort to provide an award to meet a student's entire financial need.

Financial aid funds are limited, and it is important that a student's application for assistance be complete in the Office of Scholarships and Student Aid by March 1. Preference will be given to students whose applications are complete by that date; late applications will be considered as time and funds permit.

Although a financial aid award cannot be made unless a student has been admitted to the University, an entering student should try to meet the March 1 deadline regardless of admission status. New students whose applications are complete in the Office of Scholarships and Student Aid by March 1 can expect award notification in May; returning students will be informed during the summer.

Application Process

To apply for all types of financial aid at Chapel Hill, a student will need to submit the following forms:

- The Financial Aid Form of the College Scholarship Service
- The Student Aid Report for Federal Student Aid Programs
- The Financial Aid Transcript (Required only of students who attended other colleges or universities before coming to UNC - Chapel Hill.)

Financial Aid Form (FAF). A student may obtain an FAF from a high school or college financial aid office or from the UNC- Chapel Hill Office of Scholarships and Student Aid. The statement should be completed as soon as possible after January 1 and submitted to the College Scholarship Service with instructions that a copy of the form be sent to UNC- Chapel Hill, code 5816.

All items on the FAF must be completed, not just those required for federal aid programs. In completing the FAF, the student and family should provide information from federal income tax returns for the preceding calendar year. Data about family financial circumstances should be actual, not estimated. The student must check the appropriate item on the FAF so that information from the form can be sent to the U.S. Department of Education to be considered for the Pell Grant Program.

Student Aid Report (SAR). A student who completes the FAF will receive a report of eligibility for a Pell Grant. The student should forward all copies of the SAR to the UNC-Chapel Hill Office of Scholarships and Student Aid. The University cannot make a firm commitment of financial aid funds until the SAR has been received from the student.

Financial Aid Transcript (FAT). A student who attended other colleges or universities before coming to Chapel Hill must have a FAT completed by the financial aid

office at each prior school. The form is required whether or not the student previously received financial aid. The FAT form can be obtained from the UNC-Chapel Hill Office of Scholarships and Student Aid.

Types of Financial Aid

Financial aid at Chapel Hill consists of scholarships, grants, loans, and jobs, awarded singly or in combination to meet a student's need. Students who apply for aid will be considered for all types of assistance for which they are eligible, including special scholarships awarded on the basis of academic achievement and financial need. An award will generally include the type or types of aid most appropriate to and beneficial for the individual student.

General Scholarships

University scholarships are awarded from more than 150 different scholarship funds to students who have financial need and above-average academic records. These awards usually range in value from $200 to $1,500 per year, depending upon the student's need and academic achievement and on the availability of funds. The majority of scholarship funds are restricted to undergraduate students.

Students who apply for financial aid from the University will be considered for the general scholarships for which they are eligible.

Special Scholarships

The University has a number of distinguished scholarships for undergraduate students, awarded by the Office of Scholarships and Student Aid on the basis of financial need and outstanding academic achievement. The scholarships provide from $200 up to the full amount needed by a recipient. The awards can be renewed for undergraduate study. No separate application is required for these scholarships; students who apply for aid will be considered. The special scholarships include the following:

James M. Johnston Awards are the most prestigious scholarships offered by the University. These undergraduate scholarships are awarded to entering freshmen with superior academic records and evidence of leadership ability. Stipends vary according to the student's financial need. A number of Johnston Awards are made to students in the School of Nursing.

Josephus Daniels Scholarships provide awards to students chosen on the basis of financial need, superior academic records, and evidence of leadership ability.

William A. Whitaker Scholarships are awarded to students who have outstanding academic records and financial need.

Mark R. Braswell Scholarships are given to entering freshmen from Eastern North Carolina who have high scholarship and financial need.

Marvin B. Smith Scholarships are for North Carolina juniors and seniors in the School of Business Administration. Selection is based on outstanding academic achievement in the University and financial need.

Alston-Pleasants Scholarships are awarded to students from Halifax, Franklin or Warren Counties in North Carolina. Students are selected on the basis of financial need and academic merit.

Fred W. Morrison Scholarships are awarded to students who are residents of North Carolina, have academic ability, and are in need of financial assistance.

Herbert D. and Mayme C. Pegg Scholarships are for students from Wilkes, Davidson, Davie, Forsyth, Guilford, Montgomery, Moore, Randolph, Stokes, and Yadkin counties in North Carolina. Awards are based on academic ability and financial need.

Caroline and Thomas Royster Scholarships are awarded to students with records of academic achievement, evidence of leadership qualities, and financial need.

Academic Scholarships

In addition to the special scholarships awarded by the Office of Scholarships and Student Aid to students who apply for financial aid, there are several competitive scholarships awarded on the basis of academic excellence. Financial need is not a factor for these awards.

The John Motley Morehead Awards. The Morehead Foundation awards approximately 60 scholarships to students in each incoming freshman class. Scholarships are renewable annually and are designed to cover four years of study at the University. A student may not apply for a Morehead Award. He or she must attend a school eligible to participate in the Morehead Program and be nominated by that school to compete for the scholarship. Morehead Scholars are selected by the Morehead Selection Committee on the basis of scholarship, leadership, character, and physical vigor.

Four of the 60 Awards are granted to British students and four are granted to Canadian students. In addition to receiving an annual stipend, Morehead Scholars are eligible to participate in the Morehead Foundation's Summer Enrichment Program.

Joseph E. Pogue Scholarships. Pogue Scholarships are funded from a benefaction to the University by the late Dr. and Mrs. Joseph E. Pogue. Awards are made to entering freshmen from North Carolina, with special attention to outstanding minority students. Superior academic merit, leadership potential, and evidence of responsible citizenship are the primary criteria in selecting recipients. Information and application forms for the Pogue Scholarships can be obtained from the Office of Undergraduate Admissions.

College Fellows Program. College Fellows awards are made possible by endowments established in the Arts and Sciences Foundation. Awards are made to a limited number of outstanding students in the entering freshman class. There is no separate application process. Fellows are selected on the basis of information on the application for admissions. Each College Fellow receives an award of $1,000 per year, renewable through the senior year in the College of Arts and Sciences.

William Richardson Davie Scholarships. These scholarships are provided from unrestricted University funds to selected entering freshmen on the basis of academic achievement, leadership qualities, and potential for success at the University. Awards are $1,000 per year, renewable for up to three additional years of undergraduate study. There is not a separate application form; students are considered for these awards on the basis of their admissions credentials.

Chancellor's Scholarships. Chancellor's Scholarships, with special emphasis on minority students from North Carolina and from other states, are awarded to a limited number of entering students who show outstanding academic records, leadership and involvement in school and community activities. There is no separate application form; information from the admissions application is used in the selection process. Awards are $1,000 per year, renewable for up to three additional years of undergraduate study.

Herbert Worth Jackson Scholarships. Established in 1938, these scholarships recognize superior ability and encourage continued excellence among undergraduate students. Renewable awards of $1,000 per year are made to a number of entering freshmen from North Carolina. Students are considered on the basis of credentials presented on the admissions application; there is no separate application form.

Grants

All UNC-Chapel Hill students will be considered for grant funds when they complete the FAF to apply for financial aid. Grant awards are made to undergraduate students from the federal Supplemental Educational Opportunity Grant Program and from limited University grant funds. These awards are generally based on financial need and may range in value from $200 to $2,000, depending on a student's need.

Pell Grants. The Pell Grant Program is a federal program which provides grant assistance directly to eligible, first-degree undergraduate students. All undergraduate students who submit the FAF to apply for aid will be considered for a Pell Grant. If a student is eligible for a federal grant, it will be used as part of his or her total financial assistance. A student's eligibility for a Pell Grant is based on a Congressionally approved formula which considers family financial circumstances. A grant can pay as much as $2,400, but the average award to students at UNC-Chapel Hill is $1,000.

Minority Presence Grants. Under the Board of Governors' general Minority Presence Grant Program, black students may be eligible for special financial assistance if they are residents of North Carolina, enrolled for at least three hours of degree-credit coursework, and in need of financial assistance.

North Carolina Student Incentive Grants (NCSIG). The NCSIG Program is supported by appropriations from the state and federal governments. First-degree undergraduate students who are North Carolina residents will be considered for these grants by completing the FAF. Only students with the greatest financial need can usually be funded through the NCSIG Program. FAFs must be submitted by March 15, but funds are usually awarded to students who apply earlier than the deadline.

Loans

The University administers a number of student loan programs, both federal and institutional, which provide low-interest, long-term loans to undergraduate, graduate, and professional students with financial need. Students who apply for financial aid may be considered for loan assistance. The Office of Scholarships and Student Aid encourages students to borrow as little as possible and to limit loans to one program whenever possible, to lessen the repayment burden.

The Office of Scholarships and Student Aid reserves the right to determine which loan source is most appropriate for the student, based on the funds available at the time of application. All loans require the execution of a promissory note, and a borrower must agree to repay the loan on a regular monthly basis after he or she leaves the University. Perkins Loans. The Perkins Loan Program (formerly National Direct Student Loans) is supported by federal allocations and by loan repayments from previous borrowers. There is no interest while the student is in school, and repayment at 5 percent begins 6 - 9 months after termination of student status. The program calls for deferment of payments under certain circumstances and for partial cancellation of a loan if the borrower is fulfilling specific teaching or military service.

Stafford Guaranteed Student Loans. The Office of Scholarships and Student Aid helps students obtain assistance from the Stafford Guaranteed Student Loan Program. Loans are available through lending agencies in each of the states. The primary lender in North Carolina is the College Foundation, Inc. Students may contact the Office of Scholarships and Student Aid for the names and addresses of other lenders. Eligibility for loan assistance is based on requirements of the state's lending agency and on

federal regulations. A student must have documented financial need, according to standard need analysis procedures, in order to qualify for a loan. Interest of 8 - 9 percent usually begins 9 months after a borrower terminates student status; the rate increases to 10 percent in the fifth year of repayment. The Office of Scholarships and Student Aid must certify to a lender that a student is admitted to or enrolled in good standing in the University and must report the student's cost and the amount of other financial aid awarded to the student.

Parent and Student Loans. Loans are available to parents of dependent undergraduate students through the PLUS Loan Program and to independent undergraduate, graduate, and professional students through the SLS Loan Program. Eligibility is not based on financial need, but the credit worthiness of the borrower may be reviewed. The interest rate on these loans varies up to 12 percent and the repayment period begins within 60 days. There are no deferments for parent borrowers. However, students who receive SLS may defer principal payments as allowed in the Stafford Loan Program. Loans are available from lending agencies in each of the states. The names and addresses of lenders can be obtained from the Office of Scholarships and Student Aid.

Employment

Many students work in part-time jobs, on or off-campus, to meet a portion of their University expenses. While students are encouraged to devote full-time to academic work and related activities if finances permit, employment can provide not only a source of income but also a valuable work experience.

College Work-Study Program (CWSP). Funds are provided by federal and state governments for Work-Study jobs in many University departments and offices and, on a limited basis, in off-campus agencies. CWSP employment may be awarded to needy undergraduate, graduate, and professional students.

The typical job requires 9 - 12 hours per week and pays more than the federal minimum wage. Students who remain in the same Work-Study job from year to year can expect an annual increase in the hourly wage. The Office of Scholarships and Student Aid tries to place students in jobs suited to the students' skills and interests. Students who apply for financial aid from the University may be considered for CWSP employment.

Departmental Work. Part-time jobs in the University's libraries, book stores, gymnasium, laboratories, offices, and hospitals are available to several thousand students each year. These jobs are not assigned through the Office of Scholarships and Student Aid; students should apply in person to the heads of the various departments. Students receiving other types of financial aid must make sure that departmental employment will not affect their eligibility for financial aid funds.

Additional information and instructions to apply for financial aid are available from the Office of Scholarships and Student Aid, The University of North Carolina at Chapel Hill, 300 Vance Hall, P.O. Box 1080, Chapel Hill, NC 27514.

UNC-Chapel Hill Regulations and Policies

The personal conduct of the University student is subject to the moral and legal restraints found in any law-abiding community. Additionally, the Honor Code and the Campus Code are positive forces for good citizenship, not exemptions from its sterner responsibilities. University regulations therefore are not specifications for acceptable conduct or detailed lists of offenses subject to penal action. They are intended to provide an informational basis for systematic procedures and equitable decisions in many situations involving individual students and officers of the University.

Code of The University of North Carolina (1975)

Section 502D(3) - Subject to any policies or regulations of the Board of Governors or the Board of Trustees, it shall be the duty of the Chancellor to exercise full authority in the regulation of student affairs and in matters of student discipline in the institution. In the discharge of this duty, delegation of such authority may be made by the Chancellor to faculty committees and to administrative or other officers of the institution, or to agencies of student government, in such manner and to such extent as may by the Chancellor be deemed necessary and expedient. In the discharge of his duty with respect to matters of student discipline, it shall be the duty of the Chancellor to secure to every student the right of due process and fair hearing, the presumption of innocence until found guilty, the right to know the evidence and to face witnesses testifying against him, and the right to such advice and assistance in his own defense as may be allowable under the regulations of the institution as approved by the Chancellor. In those instances where the denial of any of these rights is alleged, it shall be the duty of the President to review the proceedings.

Alcoholic Beverages

The University's Policy on Student Possession and Consumption of Alcoholic Beverages in Facilities of The University of North Carolina at Chapel Hill sets forth the conditions under which alcoholic beverages use consistent with Federal, State, and local laws and ordinances is permitted in University facilities and on University property.

North Carolina Statutes and Local Ordinance Pertaining to the Possession, Use, and Consumption of Alcoholic Beverages:

A. Generally, persons who are twenty-one (21) years of age or older may purchase, possess, or consume alcoholic beverages containing less than fourteen percent (14) of alcohol by volume (beer and unfortified wines). (General Statute 18B-300) There are some exceptions to this statement, and individuals are responsible for knowing what those exceptions are.

B. Persons who are twenty-one (21) years of age or older may purchase and possess at their home or temporary residence alcoholic beverages containing more than fourteen percent (14) of alcohol by volume (fortified wine and spirituous liquors). (General Statute 18B-301)

C. It is unlawful for any person under twenty-one (21) years of age to purchase, possess, or consume any alcoholic beverage; for anyone to sell or give to, or to aid or abet such a person in purchasing, possessing, and consuming any alcoholic beverage. (General Statute 18B-302)

D. Under no circumstances may alcoholic beverages of any kind be sold by any person, organization, or corporation on the campus of the University. (General Statute 18B-1006[a]) Both direct and indirect sales are unlawful.

E. Chapel Hill ordinances provide that it is unlawful to consume any alcoholic beverage in a public place.

In relation to alcohol, as in other matters, all members of the University community are expected to act as adults, to obey the law, to obey University policy, and take personal responsibility for their conduct. Individuals of any age who violate University policy or who threaten disorder, public disturbance, danger to themselves and others, or damage to property will be subject to disciplinary action.

Emergency Disciplinary Action

The responsibility for assuring reasonably safe conditions on campus occasionally requires that emergency action be taken to separate a student from the University, in order to protect University property or members of the University community or to prevent disruption of the academic process. The Chancellor has, therefore, created the Committee on Problem Admissions and Extraordinary Disciplinary Emergencies. The Committee acts only, with respect to disciplinary matters, when no other administrative solution, including action by the Student Judicial System, is in its judgment adequate to deal effectively with the situation.

Students whose cases may require action by the Committee fall into four categories:

A. Applicants for admission or readmission to the University who have been convicted of a crime involving assaultive or felonious behavior, who have a record of violent behavior, or who have a record of academic dishonesty or disciplinary rule violations elsewhere;

B. Students whose behavior, on or off campus, is such that their presence in the University, in the judgment of the Committee, poses

1. a continuing danger to themselves or to other members of the University community, OR
2. a continuing danger to University property, OR
3. a serious threat of disruption of the academic process;

C. Students who have been arrested and charged with a serious crime

1. of a violent nature, OR
2. of a dangerous nature, OR
3. which involved placing another person in fear of imminent physical injury or danger such that, if the student is found guilty, his presence in the University, in the judgment of the Committee, would pose

1. a continuing danger to the student or to other members of the University community, OR
2. a continuing danger to University property, OR
3. a serious threat of disruption of the academic process.

D. Students, charged by the University with a violation of policies concerning illegal drugs, whose continued presence within the University community would, if the charges are true, constitute a clear and immediate danger to the health or welfare of other members of the University community.

Full information on the Committee and its procedures is available from the Division of Student Affairs.

Transportation and Parking

Parking

Every student at UNC-Chapel Hill and UNC Hospitals who parks an automobile between 7:30 a.m. and 5 p.m. on weekdays in the University's designated reserved parking is required by the Department of Transportation and Parking to obtain and display a parking permit. Also, parking permit holders must park only in specific zones as indicated on their parking permits. After 5 p.m. on weekdays, however, students may park in any unreserved space except those in resident student lots, which are reserved until 9 p.m.

Motor vehicle parking permits may be applied for during normal registration procedures at the Department of Transportation and Parking. Vehicles found parked illegally may be cited by Parking Enforcement, and subsequent violations may result in further citations, immobilization ("booting"), or towing of the vehicle. All citations may be appealed through the Department of Transportation and Parking's Appeals Office. Appeals also can be entered by telephone by calling the Appeals Office at 962-3953, Monday through Thursday from 7:30 a.m. through 7:30 p.m. and Fridays until 5 p.m.

The Parking Enforcement Division also currently operates M.A.P. (Motorist Assistance Program) offering jump starts or lock-out key retrieval to any vehicle on campus. M.A.P. may be contacted at the Parking Enforcement Office at 962-8006 between 7 a.m. and 9 p.m. or by calling Campus Police at 962-8600 between 9 p.m. and 7 a.m.

Alternatives to Parking

The UNC Department of Transportation and Parking also sponsors many programs offering viable alternatives to parking on campus, such as:

U.N.C.-C.A.R. - University of North Carolina Campus Area Ridesharing matches services to university students and personnel who wish to carpool or vanpool.

U.N.C. Bicycle Registration - The Department of Transportation and Parking offers a bicycle registration program for bicycles stored or traveling on campus. The program serves as a deterrent to crime, aids in the identification of lost or stolen bicycles, and enables the department to better plan for improved bicycle parking facilities around campus in the future.

Chapel Hill Transit and Park and Ride - Chapel Hill Transit bus passes (unlimited town-ride, unlimited campus-ride, or 40-town/80-campus ride) may be purchased at either the Department of Transportation and Parking or at the UNC-Chapel Hill Student Stores.

For More Information

Visit the Department of Transportation and Parking during regular business hours (weekdays, 7:30 a.m. - 5 p.m.), in the Security Services Building on Morrison Drive (just off Manning Drive) on south campus. Specific concerns may be addressed at the following campus telephone numbers:

General Information	962-3951, 3952
Enforcement	962-8006
Accounts Receivable	962-3097
Appeals	962-3953
Registration	962-3951, 3952
Special Event/Conference Pkg.	962-7144
Pay Operations Pkg.	966-1036
U.N.C.-C.A.R. (Ridesharing)	962-1501

Students with temporary physical handicaps or other hardships requiring special consideration must contact the Department of Disability Services.

Change of Address

Students are required to keep the Office of Records and Registration advised at all times of their current local and home address. If their addresses (where they sleep) change, they must report this change on a Report of Address Change form which is available at the Registrar's Office, 105 Hanes Hall.

Responsibility for Mail Use Only

In their programs and activities, recognized student organizations represent their own views and actions and not necessarily those of the University. They do not represent the University in any official way.

Upon request, address lists of currently enrolled students are provided at cost by the University to recognized student organizations. The University assumes no responsibility for the manner in which mail lists of its students are used by a recognized student organization, or for any purpose or product furthered or advertised thereby.

Commercial Activities

Selling or soliciting by any person (private citizen or student), firm or corporation on the campus of the University is prohibited except as provided for in the University Facilities Use Policy.

Conduct in and Use of Residence Halls

Regulations governing conduct in and use of the halls are listed in the Housing Department's published regulations. It is expected that these regulations will be strictly observed and that every student in his or her conduct and activities will have consideration for the rights and comfort of others.

Drug Policy

Students, faculty members, administrators, and other employees of The University of North Carolina at Chapel Hill are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that makes it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the University community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the University.

Also, recent federal legislation requires, as a condition of employment, that any faculty or staff member engaged in the performance of a federal grant or contract must abide by the University's Drug Policy and must notify his or her dean, director, or department chair of any criminal drug statute conviction for a violation occurring in the work place not later than five days after the conviction.

Disciplinary proceedings against a student, faculty member, administrator, or other employee will be initiated when the alleged conduct is deemed to affect the University's interests. Penalties will be imposed for violation of the policies of the University only in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees. The penalties that may be imposed range from written warnings with probationary status to expulsions from enrollment and discharges from employment.

Every student, faculty member, administrator, and other employee of the University is responsible for being familiar with and complying with the terms of the Policy on Illegal Drugs adopted by the Board of Trustees.

Refer to the appendix of this publication for the entire Policy on Illegal Drugs. Copies of the full text of that policy are also available from your dean, director, or department chair, or from the Office of the Dean of Students or the Employee Relations Division of the University Personnel Department.

Smoking Ban

Students and faculty at UNC-Chapel Hill are expected to refrain from smoking in classrooms. Smoking in classrooms was banned by a student referendum and Faculty Council action in fall 1975.

Visitation Policy in Residence Halls

Regulations concerning visitation are applicable only to undergraduate University owned and approved residence halls. In those living areas, undergraduate students are permitted to visit in the rooms of members of the opposite sex in accordance with the visitation policy published by the Housing Department.

Each undergraduate residence hall may establish its own policies regulating the use of the residents' room for informal social activities, study sessions, and entertainment of members of the opposite sex. These policies are subject to the following limitations:

The hours of visitation shall not exceed
9 a.m. to 1 a.m. - Sunday through Thursday;
9 a.m. to 2 a.m. - Friday and Saturday.

A "quiet hours" rule shall be in effect from 9:00 p.m. until 8:00 a.m.

This policy and any rules adopted by an individual hall shall be posted conspicuously within the hall. Copies of all individual hall policies or rules shall be furnished to the Student Attorney General and the Department of University Housing.

Members of each hall - corporately and individually - should conduct themselves in a manner publicly defensible for members of the University community and residents of University housing.

The University of North Carolina: Sixteen Constituents Institutions

General Administration

C. D. Spangler, Jr., B.S., M.B.A., D.H.L., LL.D., *President*
William F. Little, B.S., M.A., Ph.D., *Vice-President - Academic Affairs and Senior Vice-President*
Roy Carroll, B.A., M.A., Ph.D., *Vice-President - Planning*
Nathan F. Simms, Jr., B.S., M.S., Ph.D., *Vice-President - Student Services and Special Programs*
L. Felix Joyner, A.B., *Vice-President - Finance*
Jasper D. Memory, B.S., Ph.D., *Vice-President - Research*
Wyndham Robertson, A.B., *Vice-President - Communications*
Jay M. Robinson, B.S., M.A., Ed.D., *Vice-President - Special Projects*
David G. Martin, Jr., B.A., LL.B., *Vice-President - Public Affairs*
L.B. Corgnati, Jr., B.S., M.S., *Interim Secretary of the University*
Richard H. Robinson, Jr., A.B., LL.B., *Assistant to the President for Legal Affairs*

History of The University

In North Carolina, all the public educational institutions that grant baccalaureate degrees are part of The University of North Carolina. The University of North Carolina at Chapel Hill is one of sixteen constituent institutions of the multicampus state university.

The University of North Carolina, chartered by the N.C. General Assembly in 1789, was the first public university in the United States to open its doors and the only one to graduate students in the eighteenth century. The first class was admitted in Chapel Hill in 1795. For the next 136 years, the only campus of The University of North Carolina was at Chapel Hill.

In 1877, the N.C. General Assembly began sponsoring additional institutions of higher education, diverse in origin and purpose. Five were historically black institutions, and another was founded to educate American Indians. Several were created to prepare teachers for the public schools. Others had a technological emphasis. One is a training school for performing artists.

In 1931, the N.C. General Assembly redefined The University of North Carolina to include three state-supported institutions: the campus at Chapel Hill (now The University of North Carolina at Chapel Hill), North Carolina State College (now North Carolina State University at Raleigh), and Woman's College (now The University of North Carolina at Greensboro). The new multicampus University operated with one board of trustees and one president. By 1969, three additional campuses had joined the University through legislative action: The University of North Carolina at Charlotte, The University of North Carolina at Asheville, and The University of North Carolina at Wilmington.

In 1971, the General Assembly passed legislation bringing into The University of North Carolina the state's ten remaining public senior institutions, each of which had until then been legally separate: Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, the North Carolina School of the Arts, Pembroke State University, Western Carolina University, and Winston-Salem State University. This action created the current sixteen-campus University. (In 1985, the North Carolina School of Science and Mathematics, a residential high school for gifted students, was declared an affiliated school of the University.)

The UNC Board of Governors is the policy-making body legally charged with "the general determination, control, supervision, management, and governance of all affairs of the constituent institutions." It elects the president, who administers the University. The thirty-two voting members of the Board of Governors are elected by the General Assembly for four-year terms. Former board chairmen and board members who are former governors of North Carolina may continue to serve for limited periods as nonvoting members emeriti. The president of the UNC Association of Student Governments, or that student's designee, is also a nonvoting member.

Each of the sixteen constituent institutions is headed by a chancellor, who is chosen by the Board of Governors on the president's nomination and is responsible to the president. Each institution has a board of trustees, consisting of eight members elected by the Board of Governors, four appointed by the governor, and the president of the student body, who serves ex officio. (The NC School of the Arts has two additional ex officio members.) Each board of trustees holds extensive powers over academic and other operations of its institution on delegation from the Board of Governors.

Board of Governors
The University of North Carolina

Samuel H. Poole, Raleigh, Chair
W. Travis Porter, Research Triangle Park, Vice-Chair
Charles Z. Flack, Jr., Forest City, Secretary
Roderick D. Adams, Durham
Lois G. Britt, Mount Olive
C. C. Cameron, Charlotte
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H. Patrick Taylor, Jr., Wadesboro
Priscilla P. Taylor, Greensboro
Joseph E. Thomas, New Bern
Harold H. Webb, Raleigh
Barbara D. Wills-Duncan, Raleigh
Ruth Dial Woods, Lumberton

Appendix

Residence Status for Tuition Purposes[1]

The following sections summarize important aspects of the residency law. A complete explanation of the Statute and the procedures under the Statute is contained in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes.* This *Manual* and other information concerning the application of this law are available for inspection in the Admissions Offices of the University. Copies of the *Manual* are also on reserve at the Robert B. House Undergraduate Library and in the Reserve Reading Room of the Health Sciences Library. All students are responsible for knowledge of the contents of the Statute and the Manual.

Every applicant for admission is required to make a statement as to his or her length of residence in North Carolina. A person who qualifies as a resident for tuition purposes under North Carolina law pays a lower rate of tuition than a nonresident. To qualify for in-state tuition, a legal resident must have been domiciled in North Carolina for at least twelve months immediately prior to the beginning of the term for which classification as a resident for tuition purposes is sought. The student must also establish that his or her presence in the State during such twelve- month period was for purposes of maintaining a bona fide domicile rather than for purposes of maintaining a mere temporary residence incident to enrollment in an institution of higher education. "Domicile" means one's permanent home of indefinite duration, as distinguished from a temporary place of abode; it is synonymous with "legal residence" and is established by being physically present in a place with the concurrent intent to make that place a domicile. To determine an individual's intent, the University evaluates his or her objectively verifiable conduct as an indicator of his or her state of mind.

Procedural Information

General. A student admitted to initial enrollment in an institution (or permitted to re-enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) is classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual matriculation. In the absence of a current and final determination of the student's residence prior to matriculation, the student is classified a nonresident for tuition purposes. The institution will thereafter reach a final determination of the student's residence status. Unless a person supplies enough information to allow the admissions officer to classify him or her as a resident for tuition purposes, the person will be classified a nonresident for tuition purposes. A residence classification once assigned (and confirmed pursuant to any appellate process invoked) may be changed thereafter (with a corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic calendar.

Transfer Students. When a student transfers from one North Carolina public institution of higher education to another, he or she is required to be treated as a new student by the institution to which he or she is transferring and must be assigned an initial residence classification for tuition purposes. The residence classification of a student by one institution is not binding on another institution. The North Carolina institutions of higher education will assist each other by supplying residency information and classification records concerning a student to another classifying institution upon request.

The transfer into or admission to a different component of the same institution (e.g., from an undergraduate to a graduate or professional program) is not construed as a transfer from one institution to another and thus does not by itself require a reclassification inquiry unless (1) the affected student requests a reclassification inquiry or (2) the transfer or enrollment occurs following the lapse of more than one quarter, semester, or term during which the individual was not enrolled as a student.

Responsibility of Students and Prospective Students. Any student or prospective student in doubt concerning his or her residence status bears the responsibility for securing a ruling by completing an application for resident status and filing it with the admissions officer. The student who, due to subsequent events, becomes eligible for a change in classification, whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the Office of Admissions of these circumstances in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

Application Process. A person may obtain an application for resident status from his or her admissions office. Applicants for admission who claim eligibility for the in-state tuition rate customarily complete a two-page residency application as a part of the admissions application packet. Some applicants for admission will thereafter be required to complete a further, four-page, residency application. Enrolled students seeking a change from nonresident to resident status are required to complete a four-page residency application. *All* applications for resident status must be filed with the proper admissions office before the end of the term for which resident status for tuition purposes is sought. The last day of the final examination period is considered the last day of the term.

After filing a resident status application, a person may receive a letter from his or her admissions office requesting more information in connection with that application. When a student receives such a request before the end of the term for which classification is sought, he or she must respond to that request no later than three weeks after the end of the term. If the student receives the request for supplemental information after the end of the term in question, he or she must supply the requested information within three weeks after receipt of the request. Failure to supply the requested information within the specified time limit will result in a continuation of the student's nonresident classification unless good cause is shown for such failure.

The admissions office may require an applicant for admission to file a residency application, or respond to a request for more information, more quickly when residence status is a factor in the admissions decision.

The pamphlet "Information About Resident Status for Tuition Purposes" contains more details about the residency application process and is available at all admissions offices.

Fraudulent Applications. If a student is classified a resident for tuition purposes after submitting falsified residentiary information or after knowingly withholding residentiary information, the student's application for in-state tuition status is fraudulent. The institution may re-examine any application suspected of being fraudulent and, if warranted, will change the student's residence status retroactively to the beginning of the term with respect to which the student originally made the fraudulent application. If this occurs the student must pay the out-of-state tuition differential for all the enrolled terms intervening between the fraudulent application and its discovery. Further, knowing falsification of responses on a resident status application may subject the applicant to disciplinary consequences, including dismissal from the institution.

Burden of Proof and Statutory Prima Facie Evidence. A person has the burden of establishing facts which justify his or her classification as a resident for tuition purposes. The balancing of all the evidence must produce a preponderance of evidence supporting the assertion of in-state residence. Under the Statute, proof of resident status is controlled initially by one of two evidentiary beginning points which are stated in terms of prima facie evidence.

a. Even if the person is an adult, if his or her parents (or court-appointed guardian in the case of some minors) are not legal residents of North Carolina, this is prima facie evidence that the person is not a legal resident of North Carolina unless he or she has lived in this state the five consecutive years prior to enrolling or re-registering. To overcome this prima facie showing of nonresidence, a person must produce evidence that he or she is a North Carolina domiciliary despite the parents' nonresident status.

b. Conversely, if the person's parents are domiciliaries of North Carolina under the Statute, this fact constitutes prima facie evidence that the person is a domiciliary of North Carolina. This prima facie showing may also be overcome by other evidence to the contrary. If a person has neither living parents nor legal guardian, the prescribed prima facie evidence rule cannot and does not apply.

Erroneous Notices Concerning Classification. If a student, who has been found to be a nonresident for tuition purposes, receives an erroneous written notice from an institutional officer identifying the student as a resident for tuition purposes, the student is not responsible for paying the out-of-state tuition differential for any enrolled term beginning before the classifying institution notifies the student that the prior notice was erroneous.

Grace Period. If a student has been properly classified as a North Carolina resident for tuition purposes and, thereafter, his or her state of legal residence changes while he or she is enrolled in a North Carolina public institution of higher education, the statute provides for a grace period during which the student is allowed to pay tuition at the in-state rate despite the fact that the student is no longer a North Carolina legal resident. This grace period extends for a minimum of twelve months from the date of change in legal residence, and if the twelve-month period ends during a semester or academic term in which the student is enrolled, the grace period extends also to the end of that semester or academic term.

Reacquisition of Resident Tuition Status. The prescribed twelve-month period of legal residence may be shortened if the person seeking to be classified as a resident for tuition purposes was formerly classified a North

[1]The information in this section comes from three sources: (i) North Carolina General Statutes, - 116§143.1, (ii) *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes,* Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes.

Carolina resident for tuition purposes, abandoned North Carolina domicile, and reestablished North Carolina domicile within twelve months after abandoning it. Interested persons should consult their admissions offices for a detailed explanation of the conditions which must be met to qualify under this section.

Appeals. A student appeal of a classification decision made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the classification decision. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in the Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded the opportunity to appear and be heard by the Committee. Any student desiring to appeal a decision of the Residence Status Committee must give notice in writing of that fact, within ten days of receipt by the student of the Committee's decision, to the Chairman of the Residence Status Committee, and the Chairman promptly processes the appeal for transmittal to the State Residence Committee. If a student has a residency application or appeal pending for a given term and does not register for that term, no further action will be taken on the application or appeal.

Tuition Payment. It is the responsibility of the student to pay tuition at the rate charged and billed while an appeal is pending. In effect, the student who is classified a nonresident at the time of tuition billing pays the nonresident rate. Conversely, if a student is classified as a resident at the time of billing, he or she pays the resident rate. Any necessary adjustments in the rate paid will be made at the conclusion of the appeal.

If a student withdraws from the University during a fall or spring semester, tuition and fees will be prorated over a period of nine weeks at a rate of one-tenth of the term's bill after deduction of an administrative charge. If a student withdraws during a summer session, tuition and fees will be prorated over a period of three weeks at a rate of one-fourth of the term's bill after deduction of the administrative charge. If a student drops the only course he or she is taking, this consitutes a withdrawal from the University.

Application of the Law to Specific Situations

Aliens. Aliens who are permanent residents of the U.S., or who hold a visa which will permit eventual permanent residence in the U.S., are subject to the same considerations with respect to determination of legal residence as citizens. An alien abiding in the U.S. under a visa conditioned at least in part upon intent not to abandon a foreign domicile (B, F, H, and J visas) cannot be classified a resident. An alien abiding in the U.S. under a visa issued for a purpose which is so restricted as to be fundamentally incompatible with an assertion by the alien of bona fide intent to establish a legal residence (C, D, and M visas) cannot be classified a resident.

Possession of certain other immigration documents may also allow an alien to be considered for in-state tuition status. For more details aliens should consult their admissions offices and the Manual. Aliens must file a Residence Status Supplemental Form in addition to the forms normally required of applicants for resident status for tuition purposes.

Married Persons. The domicile of a married person, irrespective of sex, is determined by reference to all relevant evidence of domiciliary intent. No person is precluded, solely by reason of marriage to a person domiciled outside of North Carolina, from establishing or maintaining legal residence in North Carolina. No person is deemed, solely by reason of marriage to a person domiciled in North Carolina, to have established or maintained a legal residence in North Carolina. The fact of marriage and the place of the domicile of his or her spouse are deemed relevant evidence to be considered in ascertaining domiciliary intent.

If a person otherwise can demonstrate compliance with the fundamental statutory requirement that he or she be a legal resident of North Carolina before the beginning of the term for which resident status is sought, the second statutory requirement relating to duration of residence may be satisfied derivatively, in less than twelve months, by reference to the length of the legal residence of the person's spouse, if the spouse has been a legal resident of the State for the requisite twelve-month period.

Military Personnel. The domicile of a person employed by the Federal government is not necessarily affected by assignment in or reassignment out of North Carolina. Such a person may establish domicile by the usual requirements of residential act plus intent. No person loses his or her in-state resident status solely by serving in the armed forces outside of the State of North Carolina.

Minors. A minor is any person who has not reached the age of eighteen years. Under the common law, a minor child whose parents are not divorced or legally separated is presumed to have the domicile of his or her father. This presumption may be rebutted if a preponderance of the evidence indicates that the mother and father have separate domiciles and that, under the circumstances, the child can fairly be said to derive his or her domicile from the mother. If the father is deceased, the domicile of the minor is that of the surviving mother. If the parents are divorced or legally separated, the domicile of the minor is that of the parent having custody by virtue of a court order; or, if no custody has been granted by virtue of court order, the domicile of the minor is that of the parent with whom he or she lives; or, if the minor lives with neither parent, in the absence of a custody award, the domicile of the minor is presumed to remain that of the father. If the minor lives for part of the year with each parent, in the absence of a custody award, the minor's domicile is presumed to remain that of the father. These common law presumptions control even if the minor has lived in North Carolina for five years as set forth above in **Burden of Proof and Statutory Prima Facie Evidence**, subsection a.

In determining residence status for tuition purposes, there are three exceptions to the above provisions:

1. If a minor's parents are divorced, separated, or otherwise living apart and one parent is a legal resident of North Carolina, during the time period when that parent is entitled to claim, and does claim, the minor as a dependent on the North Carolina individual income tax return, the minor is deemed to be a legal resident of North Carolina for tuition purposes, notwithstanding any judicially determined custody award with respect to the minor.

   If, immediately prior to his or her eighteenth birthday, a person would have been deemed to be a North Carolina legal resident under this provision but he or she achieves majority before enrolling in a North Carolina institution of higher education, that person will not lose the benefit of this provision if the following conditions are met:

   a. Upon achieving majority the person must act, as much as possible, in a manner consistent with bona fide legal residence in North Carolina; and

   b. The person must begin enrollment at a North Carolina institution of higher education not later than the fall academic term next following completion of education prerequisite to admission at the institution.

2. If, immediately prior to beginning an enrolled term, the minor has lived in North Carolina for five or more consecutive years in the home of an adult relative (other than a parent) who is a legal resident of North Carolina, and if the adult relative, during those years, has functioned as a de facto guardian of the minor, then the minor is considered a legal resident of North Carolina for tuition purposes. If a minor qualified for resident status for tuition purposes under this provision immediately prior to his or her eighteenth birthday, then, upon becoming eighteen, he or she will be deemed to be a legal resident of North Carolina of at least twelve months' duration.

3. Even though a person is a minor, under certain circumstances the person may be treated by the law as being sufficiently independent from his or her parents as to enjoy a species of adulthood for legal purposes. If the minor marries or obtains a judicial decree of emancipation under N.C. Gen. Stat. §7A-717, et seq., he or she is emancipated. The consequence, for present purposes, of such emancipation is that the affected person is presumed to be capable of establishing a domicile independent of that of the parents; it remains for that person to demonstrate that a separate domicile has, in fact, been established.

Prisoners. There are special provisions concerning domicile of prisoners. For more information, persons to whom these provisions may apply should consult the *Manual*.

Property and Taxes. Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

Students or prospective students who believe that they are entitled to be classified residents for tuition purposes should be aware that the processing of requests and appeals can take a considerable amount of time. A student is more likely to obtain a final decision on an application before tuition payment is due if he or she files the application several months in advance.

Military Tuition Benefits[1]

Certain members of the Armed Services, and their dependent relatives, who are not residents for tuition purposes may become eligible to be charged less than the out- of-state tuition rate under N.C. Gen. Stat. - 116§143.3, the military tuition benefit provision. Any person seeking the military tuition benefit must qualify for admission to UNC-CH and must file an application for the benefit with his or her admissions office before the first day of classes of the term for which he or she initially seeks the benefit. To remain eligible to receive the military tuition benefit, he or she must file another application for the benefit before the first day of classes of the first term in which he or

[1]The information in this section comes from three sources: (i) North Carolina General Statutes, - 116§143.3, (ii) A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes, Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes and Determination of Eligibility for the Special Military Tuition Benefit.

she is enrolled in each academic year. The burden of proving eligibility for the military tuition benefit lies with the applicant for the benefit, and the application and all required supporting affidavits must be complete and in proper order before the first day of classes of the term in question. Because of the time involved in securing the necessary affidavits from the appropriate military authorities, prospective applicants for the military tuition benefit are urged to secure application forms from their admissions offices and begin the application process several weeks before the first day of classes of the term for which they seek the benefit.

Eligibility of Members of the Armed Services. Eligible members of the Armed Services pay a rate of tuition computed by applying a statutory formula which is dependent, in part, on the amount of money payable by their Service employer to them or to the institution by reason of their enrollment. Application of the statutory formula yields the following results: if the service member's education is being fully funded by the Service employer, the amount of tuition owed is equal to out-of-state tuition; if the member's education is not being funded by his or her Service employer, he or she pays an amount equal to in-state tuition; and if the Service employer is providing partial educational funding, the amount of tuition owed depends on the amount of funding contributed by the Service employer.

To be eligible for this military tuition benefit, the individual must

a. be a member of the United States Air Force, Army, Coast Guard, Marine Corps, Navy, North Carolina National Guard, or a reserve component of one of these services; and

b. be abiding in North Carolina incident to active military duty which is performed at or from a duty station in North Carolina.

Eligibility of Dependent Relatives of Service Members. If the service member meets the conditions set forth above, his or her dependent relatives may be eligible to pay the in-state tuition rate if they share the service member's North Carolina abode; if they have complied with the requirements of the Selective Service System, if applicable; and if they qualify as *military* dependents of the service member.

If the service member voluntarily ceases to live in North Carolina or is involuntarily absent from the state on military orders (other than absences on routine maneuvers and temporary assignments), he or she is deemed to have moved his or her abode from North Carolina. If a dependent relative of a service member has become eligible for the military tuition benefit and, after the beginning of the term of eligibility, the service member moves his or her abode from North Carolina, the dependent relative will continue to be eligible for the military tuition benefit only for the remainder of that academic year. An academic year runs from the first day of classes of the fall semester through the last day of exams of the following summer session, second term.

For a detailed explanation of the military tuition benefit provision (including an explanation of the formula used to compute the tuition rate for service members), a complete list of categories of persons who are considered "dependent relatives" for purposes of establishing eligibility for the military tuition benefit, and information about the registration requirements of the Selective Service System, applicants should consult *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes* (as amended September 1985). This *Manual* is available for inspection in the Admissions Offices of the University. Copies of the *Manual* are also on reserve at the Robert B. House Undergraduate Library, and in the Reserve Reading Room of the Health Sciences Library.

Appeals of Eligibility Determinations of Admissions Officers. A student appeal of an eligibility determination made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the eligibility determination. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in that Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded an opportunity to appear and be heard by the Committee.

Any student desiring to appeal a determination of the Residence Status Committee must give notice in writing of that fact to the Chairman of the Residence Status Committee within ten days of receipt of the Committee's decision. The Chairman will promptly process the appeal for transmittal to the State Residence Committee.

Family Educational Rights and Privacy Act

As a general rule, under the federal Family Educational Rights and Privacy Act (FERPA), personally identifiable information may not be released from a student's education records without his or her prior written consent. Exceptions to this rule are set out in the FERPA regulations and the FERPA policy of The University of North Carolina at Chapel Hill.

UNC-Chapel Hill will disclose personally identifiable information from the education records of a student, without the student's prior written consent, to officials of another school or school system in which the student seeks or intends to enroll. UNC-Chapel Hill will also disclose personally identifiable information from an enrolled student's education records, without the student's prior written consent, to officials of another school or school system in which the student is contemporaneously enrolled. Time, building, and room number information from a student's class schedule will be disclosed to the University Police to assist them in serving the student with a warrant or subpoena.

UNC-Chapel Hill makes public certain information that has been designated as "directory information": the student's name, address, telephone listing, date and place of birth, major field of study, class, enrollment status (full- time, half-time, or part-time), anticipated graduation date, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. Examples of ways in which some of this information is made public include: names of students who receive honors and awards, who make the Dean's List, who hold offices, or who are members of athletic teams. The annual commencement program publishes the names of degree recipients. The University also publishes the Campus Directory annually, and some professional and graduate student groups publish directories of students in their departments or schools.

Students who do not wish to have any or all "directory information" made public without their prior consent, must send the Office of the University Registrar (CB# 2100, 105 Hanes Hall, The University of North Carolina at Chapel Hill) a signed and dated notice specifying items that are not to be published. To ensure that a listing for the student will not appear in the *Campus Directory*, this notice must be received by the Office of the University Registrar by the end of the registration period for the semester or session of first enrollment or, after an absence, of reenrollment. Such a notice will be honored until the student graduates, ceases to attend, or withdraws from the University unless the student notifies the Office of the University Registrar to the contrary in writing.

Students also have the right to inspect their "education records" as defined in the FERPA regulations. They may not inspect financial records and statements of their parents; confidential letters of recommendation placed in their education records before January 1, 1975 (with some exceptions); or confidential letters of recommendation placed in their education records after January 1, 1975, if they have waived their rights to inspect and review such letters.

A student who believes that information in his or her education records is inaccurate or misleading or violates his or her privacy or other rights may request that the institution amend the records, and, if the request is denied, he or she has the right to a hearing. If, after the hearing, the institution decides that the information is not inaccurate, misleading, or violative of privacy or other rights, the student has a right to place a statement in those records commenting on the information in question or giving the student's reasons for disagreeing with the institutional decision. The student may also place such a statement in his or her records in lieu of requesting a hearing if the student and the institution agree that an explanatory statement alone is the appropriate remedy. Complaints alleging violations of FERPA rights may also be filed with the U.S. Department of Education.

Questions about FERPA should be addressed to the Legal Adviser to the Special Assistant to the Chancellor (CB# 9150, 01 South Building). The text of FERPA and its regulations and the University's FERPA policy are also available for inspection in 01 South Building.

Firearms and Other Weapons

The possession of any gun, rifle, pistol, dynamite cartridge, bomb, grenade, mine, explosive, bowie knife, dirk, dagger, slingshot, leaded cane, switchblade knife, blackjack, metallic knuckles, or any other weapons of like kind upon any University campus or in any University owned or operated facility is unlawful and contrary to University policy. Violation of this prohibition is a misdemeanor punishable by a fine not to exceed $500 and/or six months' imprisonment, and may constitute a violation of the Campus Code.

Immunization Requirement

Effective July 1, 1986, North Carolina State law requires that no person shall attend a college or university in North Carolina unless a certificate of immunization indicating that the person has received the immunizations required by the law is presented to the college or university on or before the first day of matriculation. Students enrolled at UNC-Chapel Hill on July 1, 1986 are exempt from this requirement.

If the UNC-Chapel Hill Medical History Form containing the certificate of immunization is not in the possession of the UNC-Chapel Hill Student

Health Service ten (10) days prior to the registration date, the University shall present a notice of deficiency to the person. The person shall have 30 calendar days from the first day of attendance to obtain the required immunizations. Those persons who have not complied with the immunization requirements by the end of 30 calendar days will be *administratively withdrawn* from the University.

Policy on Illegal Drugs

I. Introduction

The Board of Trustees of The University of North Carolina at Chapel Hill, in conformity with the direction of the Board of Governors of The University of North Carolina, hereby adopts this Policy on Illegal Drugs, effective August 24, 1988. It is applicable to all students, faculty members, administrators, and other employees.

II. Education, Counseling, and Rehabilitation

A. The University of North Carolina at Chapel Hill has established and maintains a program of education designed to help all members of the university community avoid involvement with illegal drugs. This educational program emphasizes these subjects:
   1. The incompatibility of the use or sale of illegal drugs with the goals of the university;
   2. The legal consequences of involvement with illegal drugs;
   3. The medical implications of the use of illegal drugs; and
   4. The ways in which illegal drugs jeopardize an individual's present accomplishments and future opportunities.

B. The University of North Carolina at Chapel Hill provides information about drug counseling and rehabilitation services available to members of the university community through campus-based programs and through community-based organizations. Persons who voluntarily avail themselves of university services are hereby assured that applicable professional standards of confidentiality will be observed.

III. Enforcement and Penalities

A. The University of North Carolina at Chapel Hill shall take all actions necessary, consistent with State and Federal law and applicable university policy, to eliminate illegal drugs from the university community. The University's Policy on Illegal Drugs is publicized in catalogs and other materials prepared for all enrolled and prospective students and in materials distributed to faculty members, administrators, and other employees.

B. Students, faculty members, administrators, and other employees are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the university community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the university. It is not "double jeopardy" for both the civil authorities and the university to proceed against and punish a person for the same specified conduct. *The university will initiate its own disciplinary proceeding against a student, faculty member, administrator, or other employee when the alleged conduct is deemed to affect the interests of the university.*

C. Penalties will be imposed by the university in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees, as required by Section 3 of the Trustee Policies and Regulations Governing Academic Tenure in The University of North Carolina at Chapel Hill, by Section III.D of the Employment Policies for EPA Nonfaculty Employees of The University of North Carolina at Chapel Hill, by regulations of the State Personnel Commission, and the Disciplinary Procedure of the Staff Personnel Administration Guides (SPAG 37), by the Instrument of Student Judicial Governance, and by all other applicable provisions of the policies and procedures of The University of North Carolina at Chapel Hill.

D. The penalties to be imposed by the university may range from written warnings with probationary status to expulsions from enrollment and discharges from employment. However, the following minimum penalties shall be imposed for the particular offenses described.

1. *Trafficking in Illegal Drugs*
   a. For the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90 (including, but not limited to, heroin, mescaline, lysergic acid diethylamide, opium, cocaine, amphetamine, methaqualine), any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.
   b. For a first offense involving the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, (including, but not limited to, marijuana, anabolic steroids, pentobarbital, codeine), the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[1] For a second offense, any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.

2. *Illegal Possession of Drugs*
   a. For a first offense involving the illegal possession of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90, the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[2]
   b. For a first offense involving the illegal possession of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, the minimum penalty shall be probation, for a period to be determined on a case-by-case basis. A person on probation must agree to participate in a drug education and counseling program, consent to regular drug testing, and accept such other conditions and restrictions, including a program of community service, as the Chancellor or the Chancellor's designee deems appropriate. Refusal or failure to abide by the terms of probation shall result in suspension from enrollment or from employment for any unexpired balance of the prescribed period of probation.[3]
   c. For a second or other subsequent offenses involving the illegal possession of controlled substances, progressively more severe penalties shall be imposed, including expulsion of students and discharge of faculty members, administrators, or other employees.

E. *Suspension Pending Final Disposition*

When a student, faculty member, administrator, or other employee has been charged by the university with a violation of policies concerning illegal drugs, he or she may be suspended from enrollment or employment before initiation or completion of regular disciplinary proceedings if, assuming the truth of the charges, the Chancellor, or in the Chancellor's absence, the Chancellor's designee concludes that the person's continued presence within the university community would constitute a clear and immediate danger to the health or welfare of other members of the university community; provided, that if such a suspension is imposed, an appropriate hearing of the charges against the suspended person shall be held as promptly as possible thereafter.

IV. Implementation and Reporting

Annually, the Chancellor shall submit to the Board of Trustees a report on campus activities related to illegal drugs for the preceding year. The reports shall include, as a minimum, the following:

(1) a listing of the major education activities conducted during the year;
(2) a report on any illegal drug-related incidents, including any sanctions imposed;
(3) an assessment by the Chancellor of the effectiveness of the campus program and;
(4) any proposed changes in the Policy on Illegal Drugs.

A copy of the report shall be provided to the President, who shall confer with the Chancellor about the effectiveness of campus programs.

[1]Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[2]Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[3]If this balance for an employee subject to the State Personnel Act exceeds three days, that employee shall be discharged.

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1992–1993 Record

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SCHOOL OF LAW

Announcements for 1992–1993

August 1992 Number ~~1051~~ ~~1064~~ 1071

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STATEMENT ON EQUAL EDUCATIONAL OPPORTUNITY

The University of North Carolina at Chapel Hill is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees on the basis of race, color, national origin, religion, sex, age, or handicap. Any complaints alleging failure of this institution to follow this policy should be brought to the attention of the Assistant to the Chancellor. Moreover, The University of North Carolina at Chapel Hill is open to people of all races and actively seeks to promote racial integration by recruiting and enrolling a larger number of black students.

Although the publisher of this bulletin has made every reasonable effort to attain factual accuracy herein, no responsibility is assumed for editorial, clerical, or printing errors or error occasioned by mistakes. The publisher has attempted to present information which, at the time of preparation for printing, most accurately describes the course offerings, faculty listings, policies, procedures, regulations, and requirements of the University. However, it does not establish contractual relationships. The University reserves the right to alter or change any statement contained herein without prior notice.

MISSION STATEMENT
THE UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL

The University of North Carolina at Chapel Hill has been built by the people of the State and has existed for two centuries as the nation's first state university. Through its excellent undergraduate programs, it has provided higher education to ten generations of students, many of whom have become leaders of the State and the nation. Since the nineteenth century, it has offered distinguished graduate and professional programs.

The University is a research university. Fundamental to this designation is a faculty actively involved in research, scholarship, and creative work, whose teaching is transformed by discovery and whose service is informed by current knowledge.

The mission of the University is to serve all the people of the State, and indeed the nation, as a center for scholarship and creative endeavor. The University exists to expand the body of knowledge; to teach students at all levels in an environment of research, free inquiry, and personal responsibility; to improve the condition of human life through service and publication; and to enrich our culture.

To fulfill this mission, the University must:

acquire, discover, preserve, synthesize, and transmit knowledge; provide high quality undergraduate instruction to students within a community engaged in original inquiry and creative expression, while committed to intellectual freedom, to personal integrity and justice, and to those values that foster enlightened leadership for the State and the nation;

provide graduate and professional programs of national distinction at the doctoral and other advanced levels to future generations of research scholars, educators, professionals, and informed citizens; extend knowledge-based services and other resources of the University to the citizens of North Carolina and their institutions to enhance the quality of life for all people in the State; and address, as appropriate, regional, national, and international needs.

This mission imposes special responsibilities upon the faculty, students, staff, administration, trustees, and other governance structures and constituencies of the University in their service and decision-making on behalf of the University.

April 25, 1986 as adopted by the Board of Trustees, The University of North Carolina at Chapel Hill

A WELCOME FROM THE DEAN

The School of Law of The University of North Carolina at Chapel Hill has a distinguished record as an institution of higher education. Its faculty are excellent teachers who are committed to pursuing ambitious research agendas and to providing important service to the profession across the state and nation. Its student body is composed of diverse and talented individuals who come to Chapel Hill eager to learn and to prepare themselves for the challenges of their future profession. Its staff maintain a fine library collection and provide important support for the school's other diverse professional activities. Its alumni make significant contributions as advocates, counselors, public servants, and leaders of the bench and bar.

This School of Law Record provides important information about the school and its operation. It includes a glimpse of the community of people who make the school what it is, a summary of course offerings and other programs, a statement of relevant academic rules and requirements, and a description of the law school environment.

Please note that an effort has been made to include a comprehensive and up-to-date catalog of information, but that provisions in the Record are subject to change and to supplementation by other law school policies. Students should consult with the Associate Dean for Academic Affairs, Assistant Dean for Student Affairs, and Law School Registrar as needed for additional advice concerning law school requirements.

Judith Welch Wegner
Dean

1992-1993 CALENDAR

Summer Session 1992

May 18, Monday	First Day of Classes
May 25, Monday	Holiday, Memorial Day
June 19, Friday	Last day of class for 5-½ Week Courses
June 22–23, Mon.–Tues.	Final Exams for 5-½ Week Courses
July 2, Thursday	Last Day of Class for 7-½ Week Course
July 3, Friday	Holiday, Independence Day
July 6, Monday	Final Exam for 7-½ Week Course

Fall Semester 1992

August 13, Thursday	Telephonic Drop/Add Begins
August 16–18, Sun.–Tues.	Orientation and Registration, First-Year Students
August 19, Wednesday	First Day of First-Year Courses
August 20, Thursday	Trial Advocacy Begins
August 24, Monday	First Day of Upperclass Courses
September 1, Tuesday	Last Day to Add a Class via Telephone
September 7, Monday	Holiday, Labor Day
September 8, Tuesday	Last Day to Drop a Class via Telephone
October 7, Wednesday	Fall Recess Begins at 5 p.m.
October 12, Monday	Classes Resume at 8 a.m.
October 12, Monday	Classes begin at 1 p.m.; University Day
November 25, Wednesday	Meet Monday Classes; Thanksgiving Recess Begins at 1 p.m.
November 30, Monday	Classes Resume at 8 a.m.
December 4, Friday	Last Day of First-Year Courses
December 5–9, Saturday–Wednesday	First Year Reading Days
December 9, Wednesday	Last Day of Upperclass Courses
December 10, Thursday	First Year Final Examinations Begin
December 10–11, Thursday–Friday	Upperclass Reading Days
December 12, Saturday	Upperclass Final Examinations Begin
December 22, Tuesday	Examination Period Ends

Spring Semester 1993

December 21, 1992, Monday	Telephonic Drop/Add Begins
January 7, Thursday	Trial Advocacy Begins
January 11, Monday	First Day of Classes
January 15, Friday	Last Day to Add a Class via Telephone
January 18, Monday	Holiday, Martin Luther King, Jr.
January 22, Friday	Last Day to Drop a Class via Telephone
March 5, Friday	Spring Recess Begins at 5 p.m.
March 15, Monday	Classes Resume at 8 a.m.
April 9, Friday	Holiday, Good Friday
April 26, Monday	Meet Thursday Classes
April 27, Tuesday	Meet Friday Classes
April 28, Wednesday	Last Day of Classes
April 29–30, Thurs.–Fri.	Reading Days
May 1, Saturday	Final Examinations Begin
May 11, Tuesday	Final Examinations End
May 16, Sunday	Commencement

LEGAL EDUCATION AT UNC-CHAPEL HILL

History of the School of Law

A school of law, which developed into the School of Law of the University, was founded in 1843 at Chapel Hill as a private school by William H. Battle, then a judge of the Superior Court. Battle later became a justice of the Supreme Court of the state. In 1845, Judge Battle was made professor of law in the University, and it was provided that the degree of Bachelor of Laws should be conferred on those completing the prescribed two-year course. From the records of the University, however, it seems that few degrees were actually conferred.

For a long time the school maintained a certain independence from the University. The professor of law received no salary, though he enjoyed the fees from his classes. The students were not entirely subject to the discipline of the University. This was the position of the school during the professorship of Judge Battle, who retired in 1879, during the two years when the law classes were conducted by Kemp P. Battle, the President of the University, and, to a considerable extent, during the professorship of John Manning, who was elected in 1881 and died in 1899. The building in which the school was conducted from 1923 to 1968 was named for Professor Manning. In 1899 the school was completely incorporated into the University, with the late James C. MacRae, previously a justice of the Supreme Court of North Carolina, as the first Dean.

The School of Law is approved by the North Carolina Board of Law Examiners. It has been a member of the Association of American Law Schools since 1920. The School was approved by the American Bar Association in 1925. It is listed as an approved school by the Section of Legal Education and Admissions to the Bar, American Bar Association, and is registered as an approved law school by the Department of Education of the State of New York. The school's chapter of The Order of the Coif, the most important national scholastic honorary society for graduating law students, is one of the older chapters in The Order (1928).

The school entered a new era when it moved into a new facility, Van Hecke-Wettach Hall, in 1968. Van Hecke-Wettach Hall, located on the eastern boundary of campus, features dramatic contemporary architecture designed to accommodate the needs of modern legal education. Named for two former deans, Maurice T. Van Hecke and Robert Wettach, the structure consists of two buildings joined by a courtyard and connecting bridges.

Boasting an annual enrollment approaching 700 students and more than 6,000 living alumni, the school maintains its tradition of preparing its students for a lifetime of meaningful contributions and continued professional education.

Goals of Instruction

The University of North Carolina at Chapel Hill School of Law strives for excellence as a regional and national leader in the field of legal education. It pursues a threefold mission: to educate future practitioners and leaders of the bench and bar; to accomplish an ambitious research agenda; and to serve the legal profession, the state of North Carolina, and the nation through significant involvement in law reform and similar activities.

The school's educational goals include preparing its graduates to be skilled and competent professionals in the various state and federal systems in which they may practice, valuable critics and reformers of the institutions of law, and constructive and imaginative shapers and implementers of policy through the political processes. In order to achieve these goals, the School of Law strives to impart to its students an intensive and fundamental legal education that provides the basis for a lifetime of professional education. Accordingly, the school seeks to expose its students to various substantive areas of the law and to help them acquire skills in legal analysis, legal research, and oral expression. Further, the law school endeavors to develop in its students an appreciation for the ethical obligations of lawyers and to expose them to an enriched curriculum which includes attention to the institution of law in its historical, sociological, and philosophical aspects as well as to clinical courses which afford an opportunity to enhance practical skills.

William H. Battle

Maurice T. Van Hecke

Robert Wettach

The school, like the University, places a high priority on its research mission. "The University of North Carolina at Chapel Hill is a research university. Fundamental to this designation is a faculty actively involved in research, scholarship, and creative work, whose teaching is transformed by discovery, and whose service is informed

by current knowledge." The school's goals, in turn, include encouraging each faculty member to develop and pursue an ambitious research agenda, touching on matters of concern both to the state of North Carolina and to the nation; and maintaining an outstanding library for use by UNC-Chapel Hill faculty members and others who seek access to a comprehensive collection of both legal and nonlegal resources.

Providing service to the state and nation also is a major facet of the school's mission. Individual members of the faculty, drawing on their diverse interests and backgrounds, have defined this aspect of the school's mission in a variety of ways, through work with state and federal legislative bodies, participation in state and national bar organizations, contributions to the Association of American Law Schools and other groups concerned with the education and professional development of lawyers, and provision of pro bono legal assistance. These and other activities complement the school's institutional commitment to serve the state and nation by educating able lawyers who in turn pledge to provide able assistance to their clients and communities.

Program of Instruction

The basic course of instruction for the degree of Juris Doctor requires full-time enrollment in residence over three academic years.

Each entering class is introduced to the case method of study in an orientation program which precedes the start of classes in the fall. This method is the predominant form of instruction in the basic courses. It employs judicial opinions in actual cases raising the legal issues and problems relevant to the course of study. These cases also provide the common point of reference for classroom discussion and for the development of the analytical techniques essential to legal thought. Classroom discussion is considered important not only as a teaching tool but as an exercise in sharpening the abilities to challenge, distinguish, and analyze in depth. Students also gain practical experience in legal research and writing.

The constant scrutiny of the relationship of persons to the law and the expanding role of the lawyer in this process have led to teaching innovations in the school. The curriculum and instruction are enriched by the development of new courses, such as those in poverty law, law and literature, and advanced family law; a computer laboratory with interactive videodisc facilities; teachers with backgrounds in such disciplines as psychiatry, anthropology, and history; team-teaching and research with other disciplines such as political science, urban planning and environmental health, and clinical experience.

The student body numbers approximately 690 and the faculty 42. This ratio serves to support the admissions policy, a recognition of individual student identity and needs, and a tradition of easy student access to faculty. Each student has a faculty adviser and is expected to consult the adviser regarding registration, course changes, deficiencies in scholarship, and any other situations for which the advice of a faculty member might be helpful.

The curriculum is designed to give students a basic legal education which will fit them for practice in any state and the federal judicial system. Legal doctrine and contemporary problems are studied in the context of the Anglo-American common law system, and the study materials draw from case decisions, statutes and regulations of all the American states, the federal system, and to some extent from various systems in the British Commonwealth. Graduates have compiled an excellent record on the bar examinations in the several states, including North Carolina.

First-year courses are prescribed and cover the fundamental subjects in substance and procedure and introduce students to legal research and writing. The class is divided so that each student has at least one course in a small section during the fall semester.

The second-year curriculum has recently been reshaped by the faculty in certain significant respects. It seeks to achieve a number of important goals. One major goal is to ensure that each student remains actively engaged in legal education during this important time of transition, which serves as a bridge between the core instruction of the first year and the culminating electives, seminars, and skills-oriented instruction available during the third year.

Beginning in 1992–93, a special program of second-year small section courses will be created in both core and elective subjects of special interest to second-year students. Enrollment in each such course will be limited to approximately 25 students. The second-year small sections will incorporate specially tailored writing assignments designed to foster course objectives. All second-year students will be required to elect one second-year small section in an area of special interest to them, either during the fall or the spring of their second year.

Another important goal during the second year is broadening students' base of substantive knowledge. Students are therefore encouraged to select from a menu of courses generally recognized as of fundamental importance to lawyers. These courses include many of those tested on state bar examinations, although with a few exceptions, students need not have actually enrolled in courses tested on bar examinations. Second-year students have priority for enrollment in certain such courses which serve as building blocks for later electives. They need not, however, enroll in all such courses during the second year.

A related goal is to provide students with opportunities to explore subjects of special interest which may foster broader perspective on the study of law, lead to the development of individual career goals, or provide the foundation for more concentrated study during the third year. Students are therefore encouraged to take at least one elective each semester of their second year, in order to achieve such personal objectives.

The second-year curriculum also has recently been revised to provide for more effective realization of two-long-standing goals—providing sound instruction in the area of professional responsibility and helping students develop improved writing and analytical skills. Beginning in 1992–1993, students will be required to enroll in a course in professional responsibility during their second year so they can gain insight into the ethical and professional obligations of lawyers at a time when they will be able to understand and apply those insights effectively. By 1993–94 the school will offer a wider range of courses in the area of professional responsibility, so that all second-year students will have an opportunity to enroll in a relatively small section of this course, some of which may have a particular focus or emphasis that should prove of special personal interest.

The second year also will incorporate more effective instruction in writing and analysis. As noted above, appropriate writing assignments will be incorporated into the second-year small section program. Students also are encouraged to participate in the varied range of extracurricular activities designed to strengthen second-year students' skills in writing, oral communication, and advocacy, although this is no longer required to fulfill the second-year writing requirement described in previous Law School catalogs.

The third-year curriculum provides a capstone for students' legal education and begins the transition into practice. The third-year seminar program is designed to provide students with an opportunity to undertake in-depth writing and analysis in an area of special interest. Students are thus afforded an opportunity to integrate analytical, research and writing skills; work intensively with a faculty member; and interact closely with a small group of fellow students interested in similar topics.

The third year also provides students with an opportunity to deepen and broaden their substantive experience with the law. Third-year students often take advanced electives that build upon earlier foundational courses taken during the second year. They also complete the complement of courses they believe will be of particular importance in their chosen area of practice, including a selection of additional fundamentally important courses not taken during the second year.

In addition, third-year students are encouraged to enroll in "perspectives courses" that allow them to reflect on their legal studies from the viewpoint of related disciplines such as history, literature, social science, or philosophy, and the viewpoint of other cultures (through the study of comparative law). Third-year students often take advantage of the opportunity to enroll in an advanced three-unit course offered by another University department, where that course is substantially related to their interests in the law. Students also may take the opportunity at this time to enroll in independent research projects with faculty members who can supervise advanced work on an individualized basis.

The third year plays a critical role in the transition to practice, by affording third-year students the opportunity to enroll in courses offering training in practical skills. A substantial portion of the third-year class enrolls in the school's trial advocacy proram, which provides intensive training in trial-related skills begining just prior to the regular semester and culminates mid-semester in the presentation of simulated trials. Students also may enroll in the school's criminal or civil clinical programs, or in skills-related courses such as interviewing and counseling. A range of non-credit extracurricular activities also provide opportunities for development of lawyering skills.

Programs are available for earning combined degrees in Law and Regional Planning (JD/MRP), Law and Business Administration (JD/MBA), Law and Public Policy Sciences (JD/MAPPS), Law and Public Administration (JD/MPA), and Law and Public Health (JD/MPH) in four years rather than the usual five years.

A wide range of voluntary student activities and organizations supplement the academic program with research, writing, clinical and administrative experience, and provide social and recreational opportunities.

ADMINISTRATION AND FACULTY

UNC-Chapel Hill Administration

Paul Hardin, JD, Chancellor

Susan Haughton Ehringhaus, JD, Assistant to the Chancellor and Senior University Counsel

Douglass Hunt, LLB, Special Assistant to the Chancellor

David D. Dill, PhD, Assistant to the Chancellor for Planning

Robert J. Cannon, PhD, Affirmative Action Officer

Arch T. Allen III, JD, Vice-Chancellor for Development and University Relations

Donald A. Boulton, EdD, Vice-Chancellor and Dean of Student Affairs

Mary Sue Coleman, PhD, Vice-Chancellor for Graduate Studies and Research Studies

H. Garland Hershey, Jr., DDS, Vice-Chancellor for Health Affairs and Vice-Provost

Wayne R. Jones, BS, Vice-Chancellor, Business and Finance

Richard L. McCormick, PhD, Provost and Vice-Chancellor for Academic Affairs

John Douglas Swofford, MEd, Director of Athletics

Harold G. Wallace, MDiv, Vice-Chancellor for University Affairs

School of Law Administration

Judith Welch Wegner, BA, JD, Dean

Burnele Venable Powell, AB, JD, LLM, Associate Dean for Academic Affairs

William J. Turnier, BS, MA, JD, Associate Dean for Faculty Affairs

J. Elizabeth Furr, BA, JD, Assistant Dean for Admissions

Todd T. Lindsley, AB, Assistant Dean for Development

Winston B. Crisp, BA, JD, Assistant Dean for Student Affairs

Kay Cox Wijnberg, Director of Administration

Karen D. Haywood, Director of Records and Registration

Amanda V. Harding, BA, MEd, Director of Career Development and Services

Mary R. Edgerton, BA, Director of Alumni Affairs and Annual Giving

Ellen K. Smith, BA, Director of Public Information and Continuing Legal Education

Ginger Ann Morgan, Administrative Assistant to the Dean

Law Library Staff

Laura N. Gasaway, BA, MLS, JD, Director

Timothy L. Coggins, BA, MS, JD, Associate Director

Martha B. Barefoot, AB, MSLS, Reference/User Services Librarian

Julia W. Best, BA, MLS, Serials Librarian
Associate Director

Janice W. Hammett, AB, MA, MLS, Reference/User Services Librarian

Carol A. Nicholson, BA, AMLS, Technical Services Librarian

Terri O. Saye, BA, MLS, Catalog Librarian

Deborah K. Webster, AB, MSLS, Reference/Computer Services Librarian

THE FACULTY

Walter H. Bennett, Jr.

Clinical Professor of Law

AB, 1965, Washington and Lee University; MA, 1969, The University of North Carolina at Chapel Hill; JD, 1972, LLM, 1986, University of Virginia. Professor Bennett joined the UNC-Chapel Hill law faculty in 1986 and prior to that date practiced law for eight years in Charlotte, North Carolina, where he also served five years as a state district court judge. He is a supervising attorney in the Civil Clinic and teaches civil lawyering process, professional responsibility, and oral history of lawyers and judges.

Louis Dean Bilionis

Assistant Professor of Law

AB, 1979, The University of North Carolina at Chapel Hill; JD, 1982, magna cum laude, Harvard University. After a clerkship with Judge Francis D. Murnaghan, Jr., of the United States Court of Appeals for the Fourth Circuit, he then was associated with the firm of Ropes & Gray in Boston, Massachusetts. In 1984 Professor Bilionis joined the Office of the Appellate Defender in Raleigh, North Carolina. There, he represented indigent criminal defendants before the state appellate courts. Professor Bilionis joined the UNC-Chapel Hill law faculty in 1988. He teaches criminal law, criminal procedure, and evidence.

Walker Jameson Blakey

Professor of Law

AB, 1963, Harvard University; JD, 1967, Ohio State University, summa cum laude; Order of the Coif; *Ohio State Law Journal*. Admitted to practice in Ohio, 1967, Blakey was an associate with Crabbe, Newlon, Bilger, Brown, and Jones, Columbus, Ohio, 1966–1969 and an associate with Gertner and Gertner, Columbus, Ohio, 1969–1971. Professor Blakey has served as a faculty assistant, Harvard University, 1969–1971; Visiting Assistant Professor of Law, University of Tulsa, 1976; Visiting Associate Professor of Law, Indiana University, 1977; University of Arkansas, 1980; Visiting Professor of Law, University of Kentucky, 1983, 1984, 1985; Ohio State University, 1987; Assistant Professor of Law, 1971–1978, Associate Professor of Law, 1978–1981, and Professor of Law, from 1981, The University of North Carolina at Chapel Hill.

John Charles Boger

Associate Professor of Law

AB, 1968, Duke University; M.Div., 1971, Yale Divinity School; JD, 1974, The University of North Carolina at Chapel Hill. Associate Editor, *North Carolina Law Review*; Phi Beta Kappa, Order of the Coif. Boger is a native of Concord, North Carolina. After completing law school, he clerked with the Honorable Samuel Silverman of the New York Supreme Court, Appellate Division and practiced for three years in the litigation department of Paul, Weiss, Rifkind, Wharton & Garrison in Manhattan. In 1978, he joined the staff of the NAACP Legal Defense and Educational Fund, where he litigated capital punishment cases for a decade, becoming in 1983 the director of the LDF's Capital Punishment Project. In 1987, he shifted his practice at LDF, becoming director of a new Poverty & Justice Program, established to enlarge the legal rights of the minority poor. The program specializes in housing, health care, and education litigation. He is chair of the Poverty and Race Research Action Council, a national federation of civil rights, civil liberties and legal services groups which encourages national coordination of social scientific research and legal advocacy on behalf of the poor. Boger has taught as a lecturer or adjunct professor at Harvard, New York Law School, and Florida State University. He teaches civil procedure, constitutional law, race and poverty law.

Lissa Lamkin Broome

Associate Professor of Law

BS, 1978, University of Illinois, with highest honors; JD, 1981, Harvard Law School, cum laude. Professor Broome is a native of Champaign, Illinois. She majored in finance at the University of Illinois and obtained her JD from Harvard Law School where she served as an editor of the *Harvard Law Review*. Upon graduation from law school she clerked for Judge Alvin B. Rubin of the United States Court of Appeals for the Fifth Circuit in Baton Rouge, Louisiana. Professor Broome became a member of the Georgia bar in 1982 and practiced until 1984 in the banking area with the Atlanta firm of King & Spalding. In 1984 Professor Broome joined the UNC-Chapel Hill faculty. Her teaching interests include contracts, commercial law and banking law.

Kenneth S. Broun

Henry Brandis Professor of Law

BS, 1960; JD, 1963, University of Illinois, with honors; Order of the Coif; Associate Editor, *University of Illinois Law Forum*. In 1963, Professor Broun was admitted to practice in Illinois and in North Carolina in 1976. He has served as associate, Jenner & Block, Chicago, Illinois, 1963–1968; Lecturer in Law, Loyola University, 1966–1967; Visiting Assistant Professor of Law, 1968–1969; Associate Professor of Law, 1969–1973; Professor of Law, 1973–1989; Henry Brandis Professor of Law, from 1990; Dean, The University of North Carolina at Chapel Hill, 1979–1987; Visiting Professor of Law, University of Texas, 1972; University of Illinois, 1973–1974; Notre Dame Law School, England, 1984; of counsel, Petree Stockton, Raleigh, North Carolina, 1988–1989; Director, National Institute for Trial Advocacy, 1976–1979; Chairman-elect, Board of Trustees, National Institute for Trial Advocacy, 1991; Coordinator and faculty member, Trial Advocacy Training Programs, Black Lawyers Association of South Africa, from 1986; Mayor, Town of Chapel Hill, from 1991. Broun teaches civil procedure, evidence, professional responsibility, and trial advocacy.

Caroline Nicholson Brown

Professor of Law

BA, 1969, University of California at Berkeley; Phi Beta Kappa; MA, 1972, University of Rochester; JD, 1976, University of Miami. Professor Brown's family is from North Carolina, although she grew up in Miami. She served as Editor in Chief of the *University of Miami Law Review*. After a clerkship for the then Justice James G. Exum, Jr., of the North Carolina Supreme Court, she practiced with the Raleigh firm of Bode, Bode, Call, and Bruckel. In 1979 she joined the faculty of the school, where her focus is in the fields of contracts and commercial law.

Patricia L. Bryan

Professor of Law

BA, 1973, Carleton College; Phi Beta Kappa; JD, 1976, University of Iowa; LLM, 1982, New York University. Professor Bryan graduated first in her class from the University of Iowa Law School, where she served as a Notes and Comments Editor of the *Iowa Law Review*. From 1976 to 1982, she practiced tax law in New York City, while earning a Masters degree in Taxation from New York University. She joined the faculty in 1982. Her primary area of

research is corporate taxation, and she teaches courses in that field as well as individual and partnership taxation. She also teaches a seminar in law and literature. Professor Bryan was on leave for 1986–1987 visiting at Stanford Law School.

Robert G. Byrd

Burton Craige Professor of Law

BSBA, 1953, Phi Beta Kappa; JD, 1956, The University of North Carolina, with honors; Order of the Coif; Editor in Chief, *North Carolina Law Review*. Professor Byrd was admitted to practice in North Carolina in 1956. He has served as First Lieutenant, Judge Advocate General Corps, 1957–1960; Assistant Director, Institute of Government, University of North Carolina, 1960–1963; Assistant Professor of Law, 1963–1964; Associate Professor of Law, 1964–1968; Acting Dean, 1966; Professor of Law, 1968–1979; Dean, 1974–1979; Burton Craige Professor of Law, from 1979, The University of North Carolina at Chapel Hill; United States Army War College, 1980.

Donald F. Clifford, Jr.

Aubrey L. Brooks Professor of Law

Professor Clifford received his AB, 1957, Catholic University magna cum laude, student body president; JD, 1963, University of Colorado, *Law Review*, Order of the Coif. Professor Clifford clerked for the Chief Judge of the United States District Court of Colorado before joining the UNC-Chapel Hill faculty in 1964. He has been a visiting Professor during summer sessions at the University of Texas, LSU, and the University of Richmond. He was on leave at the University of Bristol (England) during the fall of 1985. He has also taught courses at Duke and North Carolina Central. Professor Clifford has been active in the North Carolina Bar Association as an officer and newsletter editor for the Business Law Section and has lectured at various Continuing Legal Education Institutes. He has worked with Bar Association Committees and the General Statutes Commission on legislative proposals dealing with North Carolina corporate, securities and commercial law, and with the American Bar Association on the revision of UCC article 2. He is a coauthor and contributor to several books on commercial and corporate law and the author of articles in those areas. He teaches business associations, sales and secured transactions, and consumer law. He was Associate Dean for Academic Affairs from 1979 to 1982 and 1989–1990.

John Martin Conley

Reef C. Ivey II Professor of Law

BA in Classics, 1971, Harvard University. After a stint as a SCUBA diver with the New England Aquarium in Boston, Conley received his JD (1977) and a PhD in Anthropology (1980) from Duke. He served as Editor in Chief of the *Duke Law Journal* and was elected to the Order of the Coif. He practiced law in Boston and Charlotte, North Carolina for six years, specializing in civil litigation. He also served as an Adjunct Professor at Boston College Law School. Since joining the UNC-Chapel Hill faculty in 1983, his principal research and teaching interests have been in law and social science and intellectual property law.

Michael L. Corrado

Professor of Law

BA, 1965, BS, 1966, Pennsylvania State University; AM, 1968, PhD, 1970, Brown University; JD, 1984, University of Chicago with honors. Professor Corrado served as Articles Editor of *The University of Chicago Law Review*. After graduation he clerked on the Seventh Circuit, and then practiced law in Chicago for three years. He joined the UNC-Chapel Hill faculty in 1988. Before law school Professor Corrado taught philosophy at Ohio University. He spent 1978–1979 at the University of Michigan on an NEH fellowship. He teaches torts, comparative law, and philosophy of law.

Charles Edward Daye

Henry Brandis Professor of Law

BA, 1966, North Carolina Central University, magna cum laude; JD, 1969, Columbia University, cum laude. Professor Daye, a native of Durham, North Carolina, began his career in 1969 as an associate with the firm of Dewey, Ballantine, Bushby, Palmer and Wood in New York City. He then served as a law clerk to the Honorable Harry Phillips, Chief Judge of the U.S. Court of Appeals for the Sixth Circuit. He practiced as an associate with Covington & Burling in Washington, DC before joining the law faculty at UNC-Chapel Hill in 1972. In 1981 Daye was named Dean of North Carolina Central University School of Law, where he served until 1985. He then rejoined the UNC-Chapel Hill law faculty. He teaches torts, housing and community development, and administrative law. Daye is the Senior Editor of a casebook, *Housing and Community Development*, 2nd Edition (1989), with Professors Mandelker, Hetzel, Kushner, McGee, Washburn, Salsich & Keating and is co-author of *North Carolina Tort Law* (1991) with Professor Morris of the NCCU School of Law. He has published a monograph, *North Carolina Administrative Procedure Act Manual* (1975), as well as articles on housing, state administrative procedure, torts and constitutional law. Daye is President of the Law School Admission Council; a member of the editorial board of *The Practical Lawyer*; President of Triangle Housing Development Corporation (a nonprofit organization which operates federally subsidized housing for low-income rural elderly), Chair of the North Carolina Poverty Project and has been Executive Secretary of the North Carolina Association of Black Lawyers since 1979. He is a member of the New York, District of Columbia, North Carolina and United States Supreme Court Bars.

Anne M. Dellinger

Professor of Public Law and Government

BA, 1962, The University of North Carolina at Chapel Hill with honors; MA, Tulane University, 1964; JD, Duke University, 1974. Phi Beta Kappa, Order of the Coif. Professor Dellinger has been on the faculty of The University of North Carolina at Chapel Hill since 1974, teaching in the areas of public law and government. For the last decade her field has been public health and hospital law. During 1980–81 she was Special Assistant to William H. Webster, Director, Federal Bureau of Investigation, Washington, DC. The general editor and an author of *Health Care Facilities Law* and *Hospital Law in North Carolina*, Professor Dellinger will teach a seminar on health care at the law school in the spring of 1993.

Robinson O. Everett

Visiting Professor of Law

A.B. 1947, J.D. 1950, Harvard University; LL.M. 1959, Duke University. Professor Everett is a native of Durham, North Carolina. He served for several years as a legal officer in the Air Force and as a commissioner of the United States Court of Military Appeals. He returned to Durham to enter a general practice, which he continued until 1980 when he ascended to the bench of the United States Court of Military Appeals as chief judge. In September 1990, he retired from this position to become a senior judge

of the Court and resume full-time teaching. From 1961 to 1964, he served as counsel to the Subcommittee on Constitutional Rights of the United States Senate Judiciary Committee. He has been active in the affairs of the North Carolina Bar, the American Bar Association, and of the community of Durham. He has long served as a commissioner on Uniform State Laws and has been active in various law reform efforts. He has published on many legal topics, most notably military justice and criminal procedure. His teaching at Duke began in 1950. He was elected to regular membership on the faculty in 1967. He visited at this School of Law in the spring of 1992 teaching a seminar in National Security Law. Professor Everett will return to UNC-Chapel Hill in the spring of 1993.

Laura N. Gasaway

Director of the Law Library and Professor of Law

BA, 1967, with highest honors; MLS, 1968, with highest honors, Texas Woman's University; JD, 1973, University of Houston. Professor Gasaway, a native of Arkansas, joined the faculty of the UNC-Chapel Hill School of Law in 1985 when she became Director of the Law Library and Professor of Law. She was Law Library Director at the University of Oklahoma from 1975 to 1984, where she directed and taught in the law school's foreign program at Queen's College, Oxford, England for three summers. From 1973 to 1975, she was Law Librarian and Assistant Professor of Law at the University of Houston. In addition to her library responsibilities, Professor Gasaway teaches intellectual property and gender based discrimination. She also teaches Law Library Management in the UNC School of Information and Library Science. She is a past president of the American Association of Law Libraries and is active in Special Libraries Association. She received SLA's John Cotton Dana award in 1987 and was named a Fellow of the Association in 1988. Professor Gasaway is a member of the American Bar Association's Accreditation Committee. At UNC-Chapel Hill she has chaired the Committee on the Status of Women and the Women's Concerns Coalition. In 1992 she received the Mary Turner Lane Award from the Association for Women Faculty and Professionals.

S. Elizabeth Gibson

Professor of Law

BA, 1972, Duke University, cum laude; JD, 1976, The University of North Carolina at Chapel Hill, with high honors, Note and Comment Editor of the *North Carolina Law Review*, Order of the Coif. Professor Gibson is a native of Raleigh, North Carolina. After law school she served as a law clerk to the late Judge J. Braxton Craven, Jr., of the U.S. Court of Appeals for the Fourth Circuit (1976–1977) and as a law clerk to Justice Byron R. White of the U.S. Supreme Court (1977–1978). Following her judicial clerkships, she practiced law with the Washington, DC law firm of Shea & Gardner, where she became a partner prior to her entry into teaching. She returned to the Law School in 1983 as an Associate Professor of Law and has been a Professor of Law since 1988. Professor Gibson teaches courses in civil procedure, federal jurisdiction, and debtor-creditor relations. She was the recipient of the 1988 and 1991 McCall Award for Teaching Excellence at the Law School.

Seymour L. Halleck

Professor of Psychiatry and Adjunct Professor of Law

PhB, 1948, BS, 1950, MD, 1952, University of Chicago; ScD, Rockford University. During his career, Professor Halleck has worked as clinical assistant, Department of Pathology, University of Chicago, 1949–1951; staff psychiatrist, Department of Justice, Medical Center for Federal Prisoners, Springfield, Missouri, 1953–1955; Coordinator of Institution Services, Psychiatric Services, Wisconsin Division of Corrections, 1960–1961; Chief of Psychiatric Services, Wisconsin Division of Corrections, 1961–1963; Assistant Professor of Psychiatry, 1958–1960; Clinical Assistant Professor of Psychiatry, 1960–1963; Associate Professor of Psychiatry, 1963–1966; Professor of Psychiatry, University of Wisconsin, 1966–1972; Professor of Psychiatry, from 1972; Adjunct Professor of Law, UNC-Chapel Hill, from 1977.

Paul Hardin

Chancellor and Professor of Law

AB, 1952, JD, 1954, Duke University. As an undergraduate he was elected to membership in Phi Beta Kappa. He finished number one in his law class and edited the *Duke Law Journal*. Following a brief period of military service, Chancellor Hardin practiced law in Birmingham, Alabama from 1956 to 1958, specializing in civil trials and appeals. A native of North Carolina, Professor Hardin was a member of the Duke Law Faculty from 1958 to 1968, and has served as a Visiting Professor of Law at the Universities of Texas, Pennsylvania, and Virginia. He is the author of a number of articles in both legal and educational journals and the coeditor of case books on the subjects of evidence and criminal procedure. Chancellor Hardin served as President of Wofford College from 1968 to 1972, as President of Southern Methodist University from 1972 to 1974, and as President of Drew University from 1975 to 1988. He began his service with The University of North Carolina at Chapel Hill, on July 1, 1988. Chancellor Hardin's principal teaching interests are torts, evidence, and procedure. He has conducted comparative legal studies in those subjects in Scotland, Jamaica, Canada, and Nigeria. Hardin is active in a number of national and regional educational associations and serves as a trustee of the Carnegie Foundation for the Advancement of Teaching.

Paul G. Haskell

William Rand Kenan, Jr., Professor of Law

AB, 1948, Harvard College; JD, 1951, Harvard Law School. After law school, Professor Haskell practiced law for ten years, and has been a member of the law faculties of Georgetown University, Case Western Reserve University, and, since 1977, UNC-Chapel Hill. He is the author of two textbooks in the fields of property and trusts and estates, and a number of law review articles. He is researching in the area of law and morality.

Thomas Lee Hazen

Cary C. Boshamer Professor of Law

BA, 1969, Columbia University; JD, 1972, Columbia Law School, member of the *Law Review's* Board of Editors. After leaving law school, Professor Hazen practiced law in New York City until 1974 when he began teaching at the University of Nebraska College of Law. In 1980, he moved from Nebraska to UNC-Chapel Hill. Professor Hazen's writings have been concentrated in the areas of corporate, securities law, and commodities; he has also written about the use of computers in legal education and contract issues relating to protecting intellectual property rights in computer software. Professor Hazen has authored a two-volume treatise on the Law of Securities Regulation, is the coauthor of a securities regulation casebook, and is the coauthor of a three volume treatise on Commodities Regulation. For nine years Professor Hazen served on a drafting committee to revise the North Carolina nonprofit and business corporation acts. He is vice-president and a member of

the board of directors of the Center for Computer-Assisted Legal Instruction. He is a member of the American Bar Association and an officer of the Business Law Section of the North Carolina Bar Association.

Donald Thomas Hornstein

Associate Professor of Law

BA, 1972, magna cum laude with Special Distinction in History, University of California at Los Angeles; JD, 1981, University of Oregon, Order of the Coif, Editor-in-Chief of the *Oregon Law Review*. In 1981–1982, Professor Hornstein clerked for a law firm in Portland, Maine, that represented the Penobscot and Passamaquoddy Indian tribes. In 1982–1983, Hornstein served as a law clerk to Judge Abner Mikva of the U.S. Court of Appeals for the District of Columbia. In 1983, he began work as an appellate attorney (Honors Program) in the Land and Natural Resources Division of the U.S. Department of Justice, where he concentrated on environmental litigation and on litigation defending Native American fishing rights in the Pacific Northwest. Between 1985 and 1986, Hornstein worked as an associate with Arnold & Porter in Washington, DC, concentrating on environmental and products liability matters. While with Arnold & Porter, Hornstein represented, on a pro bono basis, a consortium of environmental and animal welfare organizations in litigation in the U.S. Supreme Court involving Japanese whaling in the Antarctic and North West Pacific Oceans. Hornstein joined the faculty as a Visiting Associate Professor of Law in 1987, and was appointed an Associate Professor in 1989. In each of his years on the faculty he has been a finalist for the Frederick B. McCall Award for Teaching Excellence and, in 1989, won the McCall Award.

Joseph John Kalo

Professor of Law

Professor Kalo received a BA with honors from Michigan State University in 1966 and a JD, magna cum laude, from the University of Michigan Law School in 1968. During law school he served as a Note and Comment Editor on the *Michigan Law Review*. Following law school he was a judicial law clerk for Second Circuit Court of Appeals Judge Sterry R. Waterman. In 1969 he joined the Phoenix, Arizona law firm of Streich, Lang, Weeks, Cardon & French. Two years later he left private practice to become co-Director of the University of Michigan Law School clinical program. He then joined the faculty of UNC-Chapel Hill Law School in August of 1972. From 1975 to 1987 he taught in continuing legal education programs sponsored by the National Institute for Trial Advocacy and during 1979–1987 served as the Southeast Regional Director of the National Institute for Trial Advocacy. When he first joined the faculty his focus was civil litigation, but his teaching and research interests have shifted to environmental issues associated with coastal and ocean resources development. He is the author of a Coastal and Ocean law casebook (1990), and is teaching an ocean and coastal law course and seminar and the first-year course in property. In 1989 he was appointed by the Governor to a four-year term on the North Carolina Marine Science Council. In 1991 he was appointed by the governor to a four-year term on the newly-established North Carolina Ocean Affairs Council, which replaced the North Carolina Marine Science Council.

William F. Larimer

Clinical Professor of Law

Professor Larimer attended the University of Pittsburgh where he graduated magna cum laude in 1972 with a BA in Political Science and Geography. In 1972 Professor Larimer enrolled in UNC-Chapel Hill School of Law and received his JD degree in 1975. Following his graduation from Law School, Larimer joined the Chapel Hill firm of Winston, Coleman & Bernholz as an associate. In 1978, Professor Larimer and three other attorneys formed the firm of Winston, Blue, Larimer and Rooks, where he remained as a partner until joining the law school faculty in 1982. He has been a supervising attorney in the Criminal Law Clinic and an instructor in the Criminal Lawyering Process course. He has also taught in the Trial Advocacy program.

Betsy Levin

Arch T. Allen Distinguished Visiting Professor of Law

AB, 1956, Bryn Mawr College, *magna cum laude*; LLB, 1966, Yale Law School; Order of the Coif; Topics Editor, *Yale Law Journal*; LLD (Honorary) 1992, Capital University. Professor Levin was admitted to practice in the District of Columbia in 1967 and in Colorado in 1982. She clerked for Judge Simon E. Sobeloff of the U.S. Court of Appeals for the Fourth Circuit, 1966–67, and, as a White House Fellow, served as Special Assistant to the U.S. Representative to the United Nations Arthur J. Goldberg, 1967–68. She then served as Director of Education Studies at the Urban Institute before joining the faculty of Duke University School of Law in 1973. Levin left Duke to become General Counsel of the U.S. Department of Education during the Carter Administration. She then served as dean of the University of Colorado School of Law, 1981–87. She has served as Executive Vice President and Executive Director of the Association of American Law Schools for the past five years. On leave from the University of Colorado, Levin has been a visiting professor, scholar-in-residence, or adjunct professor at American University School of Law; Boston University School of Law; University of California, Hastings Law School; Georgetown University Law Center; University of Southern California Law Center; Stanford School of Education; and Yale Law School. She was the Distinguished Visiting University Professor at the University of Western Australia, 1982, and taught in the China Center for American Law Study in Beijing, PRC, 1987. Levin is a member of the Council of the American Law Institute; a Fellow of the American Bar Foundation; and a member of the Board of Directors of the National Institute for Dispute Resolution. She teaches constitutional law and educational policy and law. Levin is coauthor of a course-book, *Educational Policy and the Law*, 2nd edition (1982) and 3rd edition (1992); coeditor of *The Courts, Social Science, and School Desegregation* (1977); and editor of *Future Directions for School Finance Reform* (1975), as well as author of numerous articles on the financing of elementary and secondary education; on equal educational opportunity for racial and ethnic minorities, women, language-minority students, and students with disabilities; and on the first and fourth amendment rights of public school students.

Ronald C. Link

Professor of Law

AB, 1961, University of Illinois; MA, 1962, University of California at Berkeley; JD, 1965, University of Illinois. Professor Link was born in Kansas and reared in Illinois. He followed an AB in Chemistry, Phi Beta Kappa, from Illinois with an MA in Biochemistry from Berkeley. Tiring of life in the laboratory, he returned to Illinois to law school for a JD in 1965, where he was elected to The Order of the Coif and served as Associate Editor of the University of Illinois *Law Forum*. He practiced three years with the firm of Sidley & Austin in Chicago, primarily in wills and trusts. He then entered teaching at the University of Georgia,

and after three years came to Chapel Hill in 1971. He has since taught as a visitor at Northwestern University. Professor Link served as Associate Dean for Academic Affairs from 1982 to 1984 and as Acting Dean of the Law School from January 1988 through June 1989. His teaching interests are trusts and estates, estate planning, and property. Currently he serves as chair of the Trusts Drafting Committee of the NC General Statutes Commission and as the ABA Adviser to the NCCUSL Committee to Revise the Uniform Principal and Income Act.

David A. Logan

Visiting Professor of Law

BA, 1971, Bucknell University; MA, 1972, University of Wisconsin-Madison; JD, 1977, University of Virginia. After graduating from Bucknell, where he played Varsity basketball, Logan was a Fellow at the Center for Public Policy and Administration at the University of Wisconsin-Madison. He then worked on the McGovern for President staff and published numerous album and concert reviews for *Rolling Stone* and other music periodicals. From 1973–74 he worked at the Congressional Research Service of the Library of Congress, and assisted the House Judiciary Committee in preparing impeachment charges against President Nixon. He got his JD from Virginia in 1977, where he was a Dillard Fellow and Chair of the Moot Court Board. After clerking for the Honorable Albert V. Bryan, Jr. (E.D. Va.), he handled white collar crime and Indian law matters for Fried, Frank, Harris, Shriver & Kampelman in Washington D.C. for 2½ years. He joined the faculty at Wake Forest University School of Law in 1981. Professor Logan teaches Torts, Professional Responsibility, and Mass Media Law, has won the Branch Excellence in Teaching Award, and served on various committees, including the Art Law Drafting Committee of the N.C. General Statues Commission. He is an adviser to the N.C. Bar Ethics Committee.

Arnold Herbert Loewy

Graham Kenan Professor of Law

BS, 1961, JD, 1963, Boston University. Professor Loewy was a senior editor for the *Law Review*, and received the law school's academic achievement award for obtaining the top academic average in his graduating class. He received his LLM from Harvard in 1964, and became a member of the Connecticut Bar in 1966. Loewy was an assistant professor at the University of Connecticut Law School from 1964–1968. He was an associate professor at UNC-Chapel Hill School of Law from 1968–1973, and has been a full professor since 1973. He publishes and teaches in criminal law, criminal procedure, and constitutional law.

Martin Bernard Louis

Paul B. Eaton Professor of Law

AB, 1956, Princeton University; LLB, 1959, Harvard; LLM, 1965, Harvard. Professor Louis practiced law in Philadelphia from 1960 to 1963. In 1963 he returned to Harvard Law School as faculty assistant in charge of the Ames Competition and as a graduate student, receiving his LLM degree in 1965. That year he joined the faculty of UNC-Chapel Hill School of Law, where he has taught ever since. He teaches and has published in such areas as civil procedure, antitrust, federal jurisdiction, and administrative law.

Jerry W. Markham

Associate Professor of Law

BS, 1969, Western Kentucky University, JD, 1972, University of Kentucky, Editor-in-Chief of the *Kentucky Law Journal*; LLM, 1974, Georgetown University Law Center. From 1981–1991, Markham was an adjunct professor of law at Georgetown. He has served as an attorney in the Office of General Counsel at the United States Securities and Exchange Commission, as Secretary and Counsel for the Chicago Board Options Exchange, Inc., and as Chief Counsel for the Division of Enforcement of the United States Commodity Futures Trading Commission. Markham was also a member of the international law firm of Rogers & Wells from 1982 until he joined the faculty at UNC-Chapel Hill. Markham has published numerous law review articles in the United States and Great Britain. He also has published a two-volume treatise and a history book on the law of commodity futures regulation. He is also coeditor and contributor to an English handbook on United States Securities Regulation. Markham has served as chair of the International Commodity Regulation Committee for the American Bar Association and as co-chair of the Commodity Subcommittee of the Securities Litigation Committee of the American Bar Association.

Harry C. Martin

Visiting Dan K. Moore Distinguished Professor of Law

AB, 1942, The University of North Carolina; LLB, 1948, Harvard Law School; LLM, 1982, University of Virginia. Justice Martin is retired from the Supreme Court of North Carolina. He is a North Carolina native and served with the United States Army from 1942 to 1945. After practicing law in Asheville for fourteen years, he began a judicial career spanning three decades, with service of sixteen years as a superior court judge, four years as a judge of the North Carolina Court of Appeals, and ten years as a justice of the Supreme Court of North Carolina. He practices law and mediation in Hillsborough. Justice Martin has been a faculty member of Duke University, and has written and lectured on a variety of subjects with emphasis in state constitutional law. He has taught at the school since 1984.

Ruth Ann McKinney

Visiting Clinical Assistant Professor of Law

BA, *magna cum laude*, Duke University, 1972; MEd in Guidance and Counseling, 1976, JD with honors, 1988, The University of North Carolina at Chapel Hill. McKinney clerked for the Honorable Harry C. Martin of the North Carolina Supreme Court upon graduating from law school, and most recently was an associate in the litigation division of Maxwell & Hutson in Durham, North Carolina. In addition to directing the first-year writing program, McKinney directs the legal education advancement program, and maintains an ongoing interest in alternative dispute resolution in North Carolina.

Barry David Nakell

Professor of Law

LLB, 1966, University of Illinois, with high honors. Professor Nakell served as a law clerk to Chief Justice Roger Traynor of the California Supreme Court and was engaged in private practice in Los Angeles before joining the faculty of UNC-Chapel Hill School of Law in 1970. He is coauthor of *The Arbitrariness of the Death Penalty*, published by Temple University Press in 1987. He has successfully argued two cases before the U.S. Supreme Court and frequently appears before the U.S. Court of Appeals for the

Fourth Circuit. He helped found two legal services programs, North Carolina Prisoner Legal Services and North State Legal Services, and continues to serve on their Boards. Professor Nakell teaches criminal procedure, constitutional theory, and immigration law.

William M. O'Barr

Adjunct Professor of Law and Anthropology

BA, 1964, Emory University; MA, 1966, PhD, 1969, Northwestern University. Professor O'Barr holds his primary appointments at Duke University, where he is Professor of Cultural Anthropology and Professor of Sociology. At Northwestern, he specialized in cultural anthropology and African studies. His doctoral dissertation, based on two years' field research in Tanzania, examined the functioning of local courts and village councils. In the mid-1970s, he established the Law and Language Project at Duke University to investigate the links between language and legal processes. He has published a number of articles and books on language and law, most notably *Linguistic Evidence: Language, Power, and Strategy in the Courtroom* (1982). Coauthored with UNC-Chapel Hill Law Professor John Conley, he completed *Rules and Relationships: The Ethnography of Legal Discourse* (1990) and *Fortune and Folly: The Wealth and Power of Institutional Investing* (1992). In 1987, the project he established became the Duke-UNC Law and Language Project which he co-directs with Professor Conley. He and Professor Conley are studying linguistic factors associated with credibility.

John V. Orth

Sarah Graham Kenan Professor of Law

AB, 1969, Oberlin College; JD, 1974, MA, 1975, PhD, 1977, Harvard University. After completing law school and graduate school, Professor Orth clerked for Judge John J. Gibbons of the U.S. Court of Appeals for the Third Circuit. He is the author of *The Judicial Power of the United States: The Eleventh Amendment in American History* (1987) and *Combination and Conspiracy: The Legal History of Trade Unionism, 1721–1906* (1991), as well as of numerous scholarly articles and book reviews. He is an associate editor (for law) of the multi-volume *American National Biography*, to be published by Oxford University Press, and a contributor to the *Oxford Companion to the Supreme Court of the United States* (1992). He is a member of the editorial boards of the *Law and History Review* and *The Journal of Southern Legal History*. He is active in the American Society for Legal History, serving as chair of the Sutherland Prize Committee and in the Legal History Section of the American Association of Law Schools. He joined the UNC-Chapel Hill faculty in 1978 and served as Associate Dean in 1985–1986. Professor Orth teaches property and legal history; in recent years he also has taught in the undergraduate honors program. He chairs the University Committee on Research.

Ralph A. Peeples

Visiting Professor of Law

BA, 1973, Davidson College, cum laude; JD, 1976, New York University; Book Review Editor, New York University *Review of Law and Social Change*. Peeples was admitted to practice in Ohio in 1976 and North Carolina in 1979. He has worked as an associate, Squire, Sanders, & Dempsey, Cleveland, Ohio, 1976–1979; Assistant Professor of Law, 1979–1982; Associate Professor of Law, 1982–1985; Professor of Law, Wake Forest University, from 1985; and Visiting Assistant Professor of Law, 1982; Visiting Professor of Law, The University of North Carolina at Chapel Hill, from 1986.

Burnele Venable Powell

Associate Dean and Professor of Law

AB, 1970, University of Missouri at Kansas City; JD, 1973, University of Wisconsin; LLM, 1979, Harvard Law School. Professor Powell is a native of Kansas City, Missouri. He practiced law with the Department of Housing and Urban Development, Office of the Regional Counsel in Boston from 1973 to 1977, before assuming a position as a Graduate Law Teaching Fellow at Harvard Law School. He has been at UNC-Chapel Hill since 1979, teaching administrative law, professional responsibility, and real property. He also has taught at the University of Oregon School of Law, and Washington University in St. Louis, and is a frequent participant in continuing legal education programs. Among his most recent involvements, Dean Powell has served as Faculty Representative to the Association of American Law Schools and as a member of that Association's Special Committee on Indicators of Institutional Quality, and is a member of the North Carolina State Bar Ethics Committee. In addition, he is a member of the American Bar Association's Standing Committee on Professional Discipline and a Vice Chair of the ABA's Section on Administrative Law and Regulation's Judicial Review Committee. Dean Powell also has served as a consultant to the Administrative Conference of the United States; chair of the Faculty Council's University Priorities Committee; and is President-elect of the local chapter of the American Association of University Professors.

Alice A. Ratliff

Clinical Associate Professor of Law

BA, 1971, Duke University, with honors; MAT, 1972, JD, 1976, The University of North Carolina at Chapel Hill. The two years before Professor Ratliff entered law school, she taught in the North Carolina public schools. In 1976 she began practice with the North Central Legal Assistance Program in Durham as a staff attorney, specializing in housing law. Ratliff remained there until 1987 and during that time held the positions of supervising attorney, managing attorney and acting director. In 1987 she joined the UNC-Chapel Hill law faculty as a supervising attorney in the Civil Legal Assistance Clinic.

Michelle Frances Robertson

Clinical Associate Professor of Law

AB, 1973, Duke; MA, 1976, Georgia; JD, 1982, The University of North Carolina at Chapel Hill. After graduating from Duke with a degree in political science, Robertson worked on Capitol Hill as an administrative aide to Congressman Jerry Litton (D-Mo). In 1976 she received a masters degree in journalism from the University of Georgia. She returned to Washington where she worked as a congressional liaison for the National Cancer Institute. Following that job, she worked as a writer and editor in the Office of Cancer Communications at the Duke University Comprehensive Cancer Center. Ms. Robertson enrolled in Law School at UNC-Chapel Hill where she graduated in 1982. She was an associate in the firm of Loflin and Loflin in Durham, North Carolina, before opening her own practice. She was also of counsel to the firm of Beskind and Rudolf. Robertson began teaching at the law school in 1985 as a supervising attorney in the Criminal Law Clinic. In addition to her work in the Criminal Clinic, Ms. Robertson has lectured on various aspects of criminal law at several continuing legal education programs. She recently taught at the National Institute of Trial Advocacy Southeastern Regional Program.

Richard Rosen

Professor of Law

BA, 1969, Vanderbilt University; JD, 1976, The University of North Carolina at Chapel Hill. Following his graduation from the UNC-Chapel Hill School of Law, Professor Rosen worked for three years as a staff attorney with the Public Defender Service for the District of Columbia. In 1980 he returned to Chapel Hill as the first supervising attorney in the Criminal Law Clinic. Rosen has been the director of the Law School's clinical programs since 1982 and also teaches criminal law, criminal procedure: investigation, lawyering process, and a capital punishment seminar. He has written in the areas of criminal law and capital punishment.

Sally Burnett Sharp

Professor of Law

BA, 1964, Murray State University; MA, 1966, The University of North Carolina at Chapel Hill; JD, 1977, Memphis State University; LLM, 1978, Yale University. Professor Sharp is a native of Kentucky. She was editor-in-chief of the law review at Memphis State and has practiced law in Tennessee and Kentucky. She joined the UNC-Chapel Hill law faculty in 1979 and also has taught at the University of Texas and University of Colorado law schools. During a leave of absence from 1986 to 1988, she practiced law in a small firm in Kentucky. She teaches and publishes widely in the area of family law. She has also taught torts and conflict of laws, and is active in the Family Law Section of the North Carolina Bar Association.

Francis Patricia Solari

Visiting Assistant Professor of Law

BA 1981, The University of North Carolina at Chapel Hill; JD, 1982; MLS, 1990, North Carolina Central University. Lead Articles Editor, N.C. Cent. Law Journal. *Admitted:* NC, 1982. Attorney, Bourlon & Cappelletti, P.A., Durham, NC, 1983–85; Instructor, The University of North Carolina at Chapel Hill, 1983–85; Lecturer, North Carolina Central University, 1983–88; Acting Associate Librarian, 1988–89; Assistant Prof., since 1988; Assistant Dean, since 1991. *Subjects: Estates,* Family Law; *Legal Method; Legislation;* Property; Trial & Appellate Advocacy. North Carolina Appellate Advocacy (with Duncan), 1989. Stands. Com., North Carolina Central University, 1988–89; Secretary, Durham County Bar Association, 1988–89; Appellate Rules Study Com., North Carolina State Bar, 1988–89.

William J. Turnier

Associate Dean and Willie Person Mangum Professor of Law

BS, 1963, Fordham University; MA, 1967, Pennsylvania State University; JD, 1968, University of Virginia, Editorial Board of the *Virginia Law Review.* Upon graduation he joined the tax department of the law firm of Cravath, Swaine and Moore in New York City. He joined the UNC law faculty in 1973. His teaching and scholarly interests are in the area of federal taxation. He is the coauthor of four books in the area of taxation. He has presented scholarly papers at several conferences in this country and abroad and is a regular contributor to law reviews. Professor Turnier has served as a visiting professor at the University of Texas, the University of Utah, the University of Virginia, and the Academy of International Taxation in the Republic of China.

Judith Welch Wegner

Dean and Professor of Law

BA, 1972, University of Wisconsin-Madison, Phi Beta Kappa; JD, 1976, University of California at Los Angeles, Chief Comment Editor of the *UCLA Law Review,* Order of the Coif. Judith Welch Wegner began her term as dean of the law school in July 1989, after serving for eight years as a member of the faculty and for two years as associate dean. She received her BA with honors in 1972 from the University of Wisconsin-Madison, where she majored in English. She earned her law degree from the University of California at Los Angeles in 1976. Following graduation, she served as the law clerk to United States District Judge Warren J. Ferguson (then of the Central District of California and later of the Ninth Circuit Court of Appeals). She then worked as an attorney-adviser in the Office of Legal Counsel and as an appellate attorney in the Lands and Natural Resources Division of the United States Department of Justice. She also served as Special Assistant to United States Secretary of Education Shirley M. Hufstedler. She visited at the College of Law, University of Iowa before joining the UNC-Chapel Hill law faculty in 1981.

Arthur Mark Weisburd

Professor of Law

AB, 1970, Princeton University; JD, 1976, University of Michigan. Professor Weisburd, a native Arkansan, joined the Foreign Service after earning his undergraduate degree, serving in East Pakistan/Bangladesh during the period 1971–1973. He resigned in 1973 to enter law school at Michigan, where he served as a note editor on the *Michigan Law Review.* From his law school graduation until 1981, he worked as an associate with the Washington, DC, law firm of Winter, Cutler & Pickering, his practice ranging from participation in the legal advisory team of the Constitutional Convention of the Northern Mariana Islands, to pro bono First Amendment work, to defendants' securities and antitrust litigation. He teaches civil procedure, conflict of laws and international law and has written in the areas of political parties' rights, personal jurisdiction, and international law.

Marilyn Virginia Yarbrough

William R. Kenan, Jr., Visiting Professor of Law

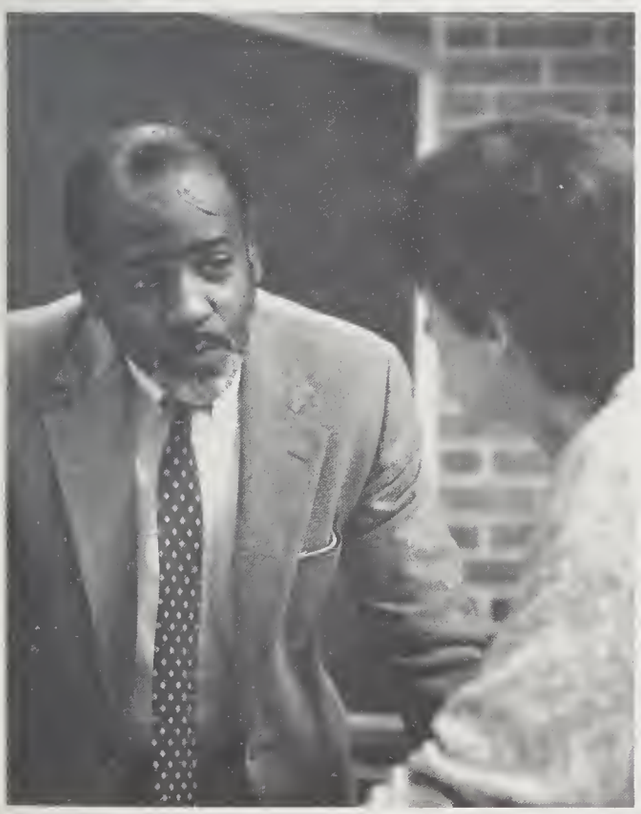
BA, 1966, Virginia State University; JD, 1973, University of California at Los Angeles; Editor-in-Chief, Black Law Journal. After four years as Dean of the College of Law at the University of Tennessee, Professor Yarbrough is on a two-year leave of absence from that faculty. Prior to this year's visit to The University of North Carolina at Chapel Hill, she served as the William J. Maier, Jr., Chair of Law at West Virginia University. Prior to entering the study of law, Yarbrough was a systems engineer with IBM Corporation and the Westinghouse Aerospace and Defense Center. She began her teaching career in law in 1975 as a teaching fellow at Boston College Law School. In 1976, she joined the faculty of the University of Kansas School of Law as an Associate Professor. Elevated to full Professor in 1981, Yarbrough held a joint appointment as Associate Vice Chancellor for Research, Graduate Studies and Public Service at the University of Kansas from 1983 to 1987. In addition to her visits to West Virginia University, she has been a visiting faculty member at Duke Law School and during the summer at the University of South Carolina. She has taught and administered several of the Council for Legal Education Opportunity's summer institutes. She was a member and chair of several committees of the Law School Admission Council, becoming a member of its Board of Trustees in 1980 and serving as its President from 1986 until 1988. She also has been active

in the American Bar Association Section of Legal Education and Admission to the Bar, including three years as chair of its Skills Training Committee. She serves as a member of the Council of the Section. Other higher education and community leadership activities include service on the Pulitzer Prize Board, the NCAA Committee on Infractions, the Board of Directors of Maryville (TN) College, the Board of Directors of the First American Bank of Knoxville, and the Boards of Directors of the United Way in both Lawrence, KS, where she served as President, and Knoxville, TN. Yarbrough's teaching and research interests include torts, race and gender discrimination, sports law, and professional responsibility. The author of articles on such subjects as employment discrimination, school reform, child custody and women in the law, Yarbrough also has coauthored articles on administrative procedure and state intervention on behalf of minors.

Lawrence A. Zelenak

Professor of Law

BA, 1976, Santa Clara University; JD, 1979, Harvard University. After graduating from law school, Zelenak practiced law with a Seattle firm for four years. He began teaching at Lewis and Clark Law School in Portland, Oregon in 1983, and joined the North Carolina faculty in 1986. His teaching and research is primarily in the areas of federal taxation. Professor Zelenak was on leave during the 1990–1991 academic year with the U.S. Department of Treasury as a professor in residence with the Internal Revenue Service.



The School of Law's faculty are excellent teachers who embody the University's mission of outstanding teaching, research, and public service.

EXTENDED FACULTY

Michael Robert Abel

Visiting Lecturer in Law

AB, 1967, Davidson College; JD, 1970, The University of North Carolina at Chapel Hill, with high honors. He has practiced law in Greensboro, North Carolina, since 1970, when he joined the law firm of Smith, Moore, Smith, Schell & Hunter. He was a partner in that firm from 1976 through 1985 and, in 1986, was a partner in the firm of Smith, Helms, Mulliss & Moore. Since 1987, Mr. Abel has been a partner in the firm of Schell, Bray, Aycock, Abel & Livingston. Abel practices primarily in the corporate and tax areas, with emphasis on mergers and acquisitions and qualified and nonqualified deferred compensation plans. He has also had extensive experience in patent-antitrust litigation and other business litigation. A member of the American, North Carolina, and Greensboro Bar Associations, Abel was a member of the North Carolina General Statutes Commission's Business Corporation Act Drafting Committee from 1985 to 1989. He is also a member of its Nonprofit Corporation Act Drafting Committee. Abel has taught a section of the business planning seminar since 1979.

Charles L. Becton

John Scott Cansler Visiting Lecturer in Trial Advocacy

BA, 1966, Howard University; JD, 1969, Duke University; LLM, 1986, University of Virginia. A native of Morehead City, North Carolina, Mr. Becton began his legal career with a year of service as an attorney for the NAACP Legal Defense and Education Fund, after which he entered private practice in Charlotte and in Chapel Hill, North Carolina. He was a Judge on the North Carolina Court of Appeals, 1981–1990. He is an attorney with the Raleigh law firm of Becton, Slifkin & Fuller, PA. He is also Senior Lecturer in Law at Duke University Law School. Becton is a litigation specialist who has taught and lectured at trial advocacy skills institutes across the country and in the Republic of South Africa. He was one of 32 attorneys (and the only judge) selected to demonstrate trial advocacy skills at the Smithsonian Folklife Festival in Washington, DC, in June 1986. He demonstrated trial advocacy skills on an ATLA/ABA/NITA video series, *Winning at Trial,* in April 1986, and on an ABA/NITA video project, *Mastering the Art of Cross Examination,* in June 1986. In January 1988, Becton received the William J. Brennan, Jr., Trial Advocacy Award for his work in improving skills of trial lawyers. In January 1990, he received the North Carolina Association of Educators' "Excellence in Equity" Award. In June 1990, Becton was named the first recipient of the Charles L. Becton Trial Advocacy Award to be given annually by the North Carolina Academy of Trial Lawyers. In July 1990, he received the Roscoe Pound Foundation's Richard S. Jacobson Award from the American Trial Lawyer Association as one of the nation's best trial advocacy teachers.

James G. Billings

Visiting Lecturer in Law

BS, 1964, North Carolina State University; JD, 1969, The University of North Carolina at Chapel Hill, *North Carolina Law Review.* After clerking with the Honorable Susie M. Sharp, Associate Justice (and later Chief Justice) of the North Carolina Supreme Court, he joined the firm of Powe, Porter, Alphin & Whichard in Durham, North Carolina. There he specialized in civil and criminal trial work. In 1976 he joined the Raleigh firm of Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, and his practice since that time has been in the area of civil litigation, with special-

ties in medical malpractice, accounting liability, aircraft litigation, products liability, business and corporate litigation, employment law, and selected catastrophic plaintiff's personal injury cases. He has tried cases in all of the Federal District Courts of North Carolina, and in numerous State Superior Courts. He has been a frequent guest speaker at various seminars conducted by the North Carolina Academy of Trial Lawyers, The North Carolina Defense lawyers Association, Wake Forest University Law School Continuing Legal Education Program, and continuing legal education seminars sponsored by Professional Education Systems, Inc. He is a member of the Wake County and North Carolina Bar Associations, the American Bar Association, the International Society of Barristers, and the American Board of Trial Advocates. He is admitted to practice before all of the state and federal courts in North Carolina, and the United States Supreme Court.

Jasper L. Cummings, Jr.

Visiting Lecturer in Law

Jack Cummings received his AB, *summa cum laude*, from Duke University in 1968 and his JD from Yale in 1971. After graduation, he returned to his North Carolina hometown, Rocky Mount, where he became a general practitioner, dabbling in tax law. He received his LLM in Taxation from New York University in 1987 and joined Womble Carlyle Sandridge & Rice as of counsel in the Raleigh office. He taught at NYU in the Graduate Tax Program during 1989–90 and will teach tax policy at UNC during the Spring of 1993. He has written a study guide for corporate tax courses with Prof. J.S. Eustice and is assisting Prof. Eustice with the Sixth Edition of the Bittker and Eustice textbook.

Susan H. Ehringhaus

Adjunct Associate Professor of Law

BA, 1966, JD, 1968, The University of North Carolina at Chapel Hill, Articles Editor, *North Carolina Law Review*. Susan H. Ehringhaus, a 1968 honors graduate of the UNC-Chapel Hill School of Law, is Senior Legal Counsel and Assistant to the Chancellor of The University of North Carolina at Chapel Hill. Following her graduation and a brief stint practicing law in Raleigh, Ehringhaus worked for the Antitrust Division of the U.S. Department of Justice until fall 1970, when she returned to join the school's faculty on a full-time basis. While at the School of Law, she taught property, trusts and estates, and real estate finance, among other courses. She became Assistant to the Chancellor of the University in 1974 and has served in that role along with the role of Senior Legal Counsel for the University since that time. Her duties include participation as a senior administrative official of the University in its day-to-day operations as well as principal in-house responsibility for the conduct of its legal affairs. Active in state and national organizations concerned with law and education, Ehringhaus has particular expertise in areas related to technology transfer, university-industry relations, business operations, ethics in research and employment in the higher education setting. Since assuming her present position in 1974, Ehringhaus has taught single courses at the school. She currently teaches a seminar in the law of higher education.

James C. Fuller, Jr.

Visiting Lecturer in Law

AB, 1965, Davidson College; JD, 1971, The University of North Carolina at Chapel Hill. After clerking with the Honorable Susie M. Sharp, Chief Justice of the North Carolina Supreme Court, he moved to Charlotte, where he spent twelve years with the civil rights firm headed by Julius Chambers. Since 1984, Fuller has practiced with the Raleigh firm of Becton, Slifkin & Fuller, where his practice primarily is directed to the trial and settlement of major personal injury and wrongful death cases. Fuller has taught Trial Advocacy at the School of Law since 1984, and also teaches the course at Duke Law School. He has lectured extensively, including programs with the North Carolina Academy of Trial Lawyers, the Association of Trial Lawyers of America, NAACP Legal Defense Fund, North Carolina Association of Black Lawyers, North Carolina District Attorneys Association, North Carolina School Boards Association, United States Department of HUD, North Carolina Association of Educators, and others. He has been tapped for membership by the American Board of Trial Advocates and the International Society of Barristers. He is president of the North Carolina Civil Liberties Union and past president of the North Carolina Academy of Trial Lawyers. Active in community affairs, Fuller chairs the Raleigh Human Relations Commission.

K. Edward Greene

Visiting Lecturer in Law

BA, 1966, East Carolina University; JD, 1969, The University of North Carolina at Chapel Hill, President of Student Bar Association, recipient of Van Hecke-Wettach Citizenship Award; LLM, 1990, University of Virginia. Judge Greene is a North Carolina native. He practiced law with the firm of Morgan, Bryan, Jones, Johnson, Hunter and Greene in Dunn, North Carolina, from 1968–1978. Governor James B. Hunt appointed Judge Greene to the District Court Bench for the 11th Judicial District in 1979. He was reelected to that court in 1980 and 1984. Greene was certified as a juvenile judge by the Administrative Office of the Courts in 1982. He coauthored *Youth and the Law*, Second Edition, in 1985. This book is widely used as a textbook across the state for teaching law-related education in the high schools. Greene, as an Adjunct Professor, has since 1985 taught Juvenile Law at Campbell University, Norman Adrian Wiggins School of Law. In 1986, Greene was elected as a judge on the North Carolina Court of Appeals and was reelected for an eight-year term in 1990. In Spring 1992, he visited at UNC-Chapel Hill, teaching Family Law.

Jo Ann T. Harllee

Visiting Lecturer in Law

BS, 1973, East Carolina University; JD, 1978, The University of North Carolina at Chapel Hill. Harllee is a native of North Carolina. She graduated with high honors from the Law School at The University of North Carolina at Chapel Hill, where she served as Research Editor of the *North Carolina Law Review*. Since graduating from law school, she has practiced with the firm of Smith, Helms, Mulliss & Moore in Greensboro, North Carolina, and has been a partner of that firm since 1985. Harllee specializes in the areas of real estate law and estate planning and probate and is a Board Certified Specialist in Estate Planning and Probate. She has taught the Real Estate Practice course since 1984.

Henderson Hill

Visiting Lecturer in Law

BA, 1977, Lehman College, City University of New York; JD, 1981, Harvard Law School. Hill has been Acting Director of the North Carolina Resource Center, a division of the Office of the Appellate Defender, since February 1991. Prior to that appointment, he held four positions in the Public Defender Service for the District of Columbia. Hill worked as Training Director, July 1990–February 1991; Deputy Chief, Appellate Division, November 1988–June 1990; Special Litigation Counsel, September 1986–November 1988;

and Staff Attorney, October 1981–September 1986. Hill studied in the Master of Public Policy program at Harvard University's Kennedy School of Government. He will teach trial advocacy.

Sandra L. Johnson

Visiting Lecturer in Law

BA, 1967, Duke University; JD, with honors, 1975, The University of North Carolina at Chapel Hill. Admitted to practice in North Carolina, 1975, Johnson has served as: staff attorney, Legal Aid Society of Durham County, 1975–1977; partner, Johnson and Johnson, P.A., Raleigh, North Carolina, from 1978; Visiting Lecturer in Law, The University of North Carolina at Chapel Hill, from 1981; Adjunct Professor of Trial Advocacy, Duke University, from 1989; member of the faculty for the National Institute for Trial Advocacy since 1982.

Doriane Lambelet

Visiting Lecturer in Law

BA, 1982, Cornell University; J.D., 1988, Georgetown University Law Center. From 1988 until 1991, Lambelet worked at the Washington DC law firm of Wilmer, Cutler & Pickering, on a variety of cases including insurance, toxic torts, and race discrimination litigation. Beginning in 1988, she was instrumental in creating the drug testing program enforced by the U.S. track and field federation; and beginning in 1989 she prosecuted athletes who tested positive under that program in administrative hearings. In 1990 and 1991, she successfully defended the program in federal court against constitutional and statutory challenges. Lamhelet also has written in the areas of international copyright and international human rights law. Lambelet, an international caliber 800-meter runner, left Wilmer, Cutler in 1991 to train for the 1992 Olympics.

Thomas K. Maher

Visiting Lecturer in Law

BA, 1979, Northwestern University; JD, The University Of North Carolina at Chapel Hill, with High Honors, Articles Editor for the *Law Review*. Maher left Chapel Hill for a two year federal clerkship in Chicago, got tired of the Cubs losing, and returned to North Carolina after watching *To Kill A Mocking Bird*, and deciding to become a southern lawyer. Maher practices criminal defense with the firm of Beskind, Rudolf & Maher in Chapel Hill, and has been on the faculty of the National Institute for Trial Advocacy and teaches a criminal litigation clinic at Duke Law School. Maher is a contributing editor for *The Champion*, published by the National Association of Criminal Defense Lawyers, and has spoken at CLE programs on grand jury matters, evidentiary privileges, and forfeiture laws.

Carolyn McAllaster

Visiting Lecturer in Law

BA, 1972, JD, 1976, The University of North Carolina at Chapel Hill. Admitted to practice in North Carolina, 1976. McAllaster has served as: Associate Attorney, Loflin & Loflin, Durham, North Carolina, 1976–78; Partner in Durham, North Carolina, firm of Thompson & McAllaster, PA, 1979–1988. McAllaster was President of the North Carolina Association of Women Attorneys from 1978 to 1980. She has been a faculty member of the National Institute for Trial Advocacy several times and is a frequent CLE speaker. McAllaster teaches the civil litigation clinic and the child advocacy clinic at Duke University Law School and has taught trial advocacy at Campbell University Law School and North Carolina Central School of Law.

William S. Mills

Visiting Lecturer in Law

BA, 1975, JD, 1979, The University of North Carolina at Chapel Hill with honors, School of Law *Law Review* and the Mock Trial Team. After graduation from UNC-Chapel Hill, Mills served as adviser and coach to the school's Mock Trial Team from 1980 to 1983. He has been a member of the faculty for the National Institute for Trial Advocacy since 1985. Mills served as President of the Fourteenth Judicial District Bar, 1987–1988 and is the founding chairman of the Fourteenth Judicial District State Bar Local Grievance Committee. He became a Visiting Lecturer in Trial Advocacy in 1989. Mills is a partner in the law firm of Glenn, Mills & Fisher, in Durham, North Carolina.

Ilene Berenter Nelson

Visiting Lecturer in Law

BS, 1970, University of Colorado; AM, 1972, University of Chicago; JD, 1979, University of California Hastings College of Law. Nelson is a native of Idaho and began her career in social work in Chicago, working with the elderly and then moved to San Francisco, where she worked with the retarded. Following law school, Nelson served as law clerk to the Honorable Joseph McFadden, Justice of the Idaho Supreme Court. She was on the faculty at the University of Hawaii from 1980 to 1982 and then on the faculty of North Carolina Central University from 1982 to 1985. She has taught courses at UNC-Chapel Hill Law School since 1985 teaching civil procedure and juvenile law. She is the administrator of the State *Guardian ad Litem* program after being a partner at the law firm of Edelstein, Payne and Nelson in Raleigh. Nelson is a regular presenter at the CLE programs, teaches in the NITA program, and serves on a number of community boards and legal committees.

Carlyn G. Poole

Visiting Lecturer in Law

BA, 1962; MA, 1963, Texas Tech University; JD, 1979, The University of North Carolina at Chapel Hill, with honors, Managing Editor, *North Carolina Law Review*, Order of the Coif. Poole is a native of Texas. Since graduating from law school, she has practiced with Tharrington, Smith & Hargrove in Raleigh, North Carolina, and has been a partner in that firm since 1983. She served as president of the Wake County Bar Association and Tenth Judicial District Bar in 1991. Poole's practice centers on family law. She is a fellow of the American Academy of Matrimonial Lawyers, has served as chair of the Family Law Section of the North Carolina Bar Association, and has lectured regularly at continuing legal education programs.

David S. Rudolf

Adjunct Associate Professor of Law

AB, 1971, Rutgers University; London School of Economics; JD, 1974, New York University School of Law, Articles Editor, *Annual Survey of American Law*. After graduating from NYU, Rudolf practiced as a criminal defense attorney with the Legal Aid Society in New York. During that time he spent two years as a staff attorney in the Bronx, and two years as an Assistant Federal Defender in Brooklyn. In 1978 he joined the faculty at UNC-Chapel Hill as an Assistant Professor of Law, and founded the Criminal Law Clinic and the Civil Clinic. In 1982 he left the faculty to begin his own practice in Chapel Hill with the firm of Beskind and Rudolf, PA. The firm (now Beskind, Rudolf, Maher) limits its practice to complex criminal and civil litigation. Since 1982, Mr. Rudolf has lectured in the trial advocacy program at UNC-Chapel Hill.

Melissa Saunders

Visiting Lecturer in Law

BA, 1983, Yale College, *summa cum laude*, Phi Beta Kappa; JD, 1987, University of Virginia, Executive Editor of the *Virginia Law Review*, Armour Law Scholar, Order of the Coif. Following law school, she clerked first for Judge J. Dickson Phillips, Jr., of the United States Court of Appeals for the Fourth Circuit, and then for Chief Justice William H. Rehnquist of the United States Supreme Court. Since 1990, she has practiced law with the Charlotte firm of Robinson, Bradshaw & Hinson, P.A., where she specializes in civil litigation and employment discrimination law. Her recent experiences include state and federal constitutional litigation and the *pro bono* representation of an indigent criminal defendant in the United States Supreme Court. She teaches constitutional tort litigation. Saunders grew up in Chapel Hill.

Elliot M. Silverstein

Visiting Lecturer in Law

BA, 1969, University of Pennsylvania, Wharton School; JD, 1973, Harvard Law School; PhD, 1977, The University of North Carolina at Chapel Hill. While at Harvard Law School, Silverstein became attracted to the psychological aspects of law and human behavior and decided to obtain further mental health training. In 1973, he moved to Chapel Hill to obtain a PhD in clinical psychology. In 1975, while in graduate school, Dr. Silverstein and Professor Walker Blakey first taught the Interviewing, Counseling and Negotiation course they periodically offer. After graduating from UNC-Chapel Hill in 1977, Dr. Silverstein worked at Dorothea Dix Hospital in Raleigh, North Carolina. At the hospital, he worked with hospitalized teenagers and children seen in an outpatient clinic and served as legal consultant for the Division of Child and Youth. In the past few years, he has worked in a more supervisory capacity, helping to train mental health professionals such as social workers, psychologists, and psychiatrists. Several years ago Dr. Silverstein obtained a Diplomate in Forensic Psychology and currently holds the rank of Clinical Associate Professor of Psychiatry at the UNC-Chapel Hill School of Medicine.

Susan Austin Stancill

Visiting Clinical Assistant Professor of Law

BA, 1985; JD, 1988, The University of North Carolina at Chapel Hill. After obtaining her JD in 1988, Stancill practiced law from 1988 until 1989 with the firm of Liner and Crawford in Winston-Salem, North Carolina. She returned to the Triangle in 1989 and joined the firm of Stubbs, Cole, Breedlove, Prentis and Biggs in Durham, specializing in family law. In addition to practicing law, Stancill is active in the Durham Companions Program and has recently been named to the board of Concern of Durham, Inc., a nonprofit corporation serving the needs of adolescents with behavior disorders. Stancill is a visiting instructor in the Civil Lawyering Process course and supervising attorney in the Civil Law Clinic.

Nelson Ferebee Taylor

Cary C. Boshamer Professor of Law Emeritus

Professor Taylor, a native of Oxford, North Carolina, received his BA from The University of North Carolina in 1942 and then served as an officer in the United States Navy during World War II. He received his LLB from Harvard Law School in 1949 and then studied as a Rhodes Scholar at Balliol College, Oxford University, where he received his MA. After practicing law for almost nineteen years in New York City, he returned to North Carolina in 1970 to become Vice-President for Administration of The University of North Carolina. He became Chancellor of The University of North Carolina at Chapel Hill in 1972 and served in that post for eight years. Since 1980 he has been the Boshamer Professor in the School of Law and Professor Emeritus since 1991.

Willis P. Whichard

Visiting Lecturer in Law

AB, 1962, JD, 1965, The University of North Carolina at Chapel Hill; LLM, 1984, University of Virginia. Following a clerkship with Justice (later Chief Justice) William H. Bobbitt of the North Carolina Supreme Court, Justice Whichard practiced law with the Durham law firm Powe, Porter, Alphin and Whichard from 1966–1980. He served as a member of the North Carolina General Statutes Commission, 1969–1973; the North Carolina House of Representatives from 1970–1974, the North Carolina Senate from 1974–1980. In 1978 he was an Instructor in Business Law in the Graduate School of Business Administration at Duke University. He was an Associate Judge on the North Carolina Court of Appeals, 1980–1986 and has been an Associate Justice of the North Carolina Supreme Court since 1986. He has been a Visiting Lecturer in Law since 1986.

Visiting Lecturers in Research and Writing

1992–1993

Valerie Lynn Bateman
David Edmund Crescenzo
Thomas Dean Domonoske
Cynthia Ann Hagaman
Dean Murray Harris
G. Nicholas Herman
Nancy L. Hilburn
William McBlief
Robert Carson Montgomery
Robin Eugene Pipkin
David Graham Powell

Faculty Emeriti

Date in parentheses indicates date each joined Faculty.

William Brantley Aycock *(1948)*
Kenan Professor of Law
BA, North Carolina State University, 1936; AM, 1937; JD, 1948 The University of North Carolina; LLD, Wake Forest University, 1959; Atlantic Christian College, 1959; Duke University, 1963; The University of North Carolina at Chapel Hill, 1987.

Herbert Ralph Baer *(1945)*
Alumni Distinguished Professor of Law
AB, Cornell University, 1923; LLB, Harvard University, 1926.

Eugene Gressman *(1977)*
William Rand Kenan, Jr., Professor of Law
AB, 1938, JD, 1940, University of Michigan.

Harry E. Groves *(1981)*
Henry Brandis Professor of Law
BA, University of Colorado, 1943; JD, University of Chicago, 1949; LLM, Harvard University, 1959.

William Patrick Murphy *(1971)*
Henry Brandis Professor of Law
BA, Southwestern at Memphis, 1941; LLB, University of Virginia, 1948; JSD, Yale University, 1960.

Mary Wilhelmina Oliver *(1955)*
Professor of Law, Law Librarian
AB, Western Maryland College, 1940; BSLS, Drexel University, 1943; JD, The University of North Carolina, 1951.

Daniel Hubbard Pollitt *(1957)*
Graham Kenan Professor of Law
BA, Wesleyan University, 1943; JD, Cornell University, 1949.

John Winfield Scott, Jr. *(1962)*
Graham Kenan Professor of Law
BS, Auburn University, 1943; LLB, Harvard University, 1947; LLM, Harvard University, 1951.

Frank Ransom Strong *(1965)*
Cary C. Boshamer Distinguished Professor of Law
AB, Yale University, 1929; JD, 1934; LLD, North Carolina Central University, 1978; Ohio State University, 1978.

Nelson Ferebee Taylor *(1980)*
Cary C. Boshamer Professor of Law
BA, The University of North Carolina, 1942; LLB, Harvard Law School, 1949; MA, Balliol College, Oxford University.

The school's curriculum provides a solid grounding in traditional and changing areas of law, legal research and writing, legal ethics, practical skills, and interdisciplinary perspectives.

ADMISSIONS AND FINANCES

Admissions Information

Beginning students are admitted for the full-time course of study of law for the fall semester only. All admitted students must present proof of graduation from an accredited undergraduate institution. To comply with this requirement, all students must submit an official transcript documenting the awarding of an undergraduate degree to the School of Law Admissions Office prior to the date of initial enrollment.

Admission is highly competitive each year for the 235 spaces available in the first-year class. The specifics of the application process are described in greater detail in the annual publication of the admissions office which can be obtained by writing or by calling the school.

EXPENSES

Tuition and Fees

Tuition and fees for 1991–92 were $1314.00 for residents of North Carolina and $8676.00 for nonresidents. The University reserves the right, with the approval of the proper authorities, to make changes in tuition and fees at any time.

Tuition and fees are assessed on a semester basis and are due prior to registration. Payments may be made in advance, in person or by mail. Mastercard, and VISA are acceptable. To avoid the inconvenience of standing in line, please mail your payment to: University Cashier, The University of North Carolina at Chapel Hill, CB# 1400, 103 Bynum Hall, Chapel Hill, NC 27599-1400. Checks should be made payable to The University of North Carolina at Chapel Hill. The student's ID number should be on the face of the check. Accounts not paid in full by the due date are subject to cancellation of registration.

Each student is responsible for payment of his or her University bills. If someone other than the student is responsible for payment of his/her bill, the University Cashier should be notified in ample time so that a bill may be sent to the proper person or agency.

Students who are expecting to receive financial aid, scholarship funds, fellowship funds, or payment for service appointments should bring with them sufficient funds (cash or travelers checks) to take care of living expenses for approximately fifteen days. This should provide sufficient time for appropriate funds to be made available.

The Office of Scholarships and Student Aid establishes student budgets to help students in planning for expenses. For additional information on these budgets, please contact the Office of Scholarships and Student Aid, CB# 2300, 300 Vance Hall, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

Tuition Refunds

Students who officially withdraw from the University within nine weeks of registration may receive a partial refund of the tuition and fees paid for that semester. The refund is prorated over a period of nine weeks at a rate of one-tenth of the semester's bill after deduction of an administrative charge.

Financial Aid

Financial aid, including scholarships and federally supported loans, such as Stafford Loans, Supplemental loans and Carl Perkins Loans, is available to law students who meet federal and University eligibility requirements. Applicants for admission or students applying for need-based scholarships and/or loans must submit a Financial Aid Form (FAF) to the College Scholarship Service by March 1. Financial Aid Forms are available from College Scholarship Service, CN 6328, Princeton, NJ 08541, from the UNC-Chapel Hill Office of Scholarships and Student Aid, and from student aid offices at most universities and colleges. Additional information concerning financial aid may be obtained from the Office of Scholarships and Student Aid, The University of North Carolina at Chapel Hill, CB# 2300, 300 Vance Hall, Chapel Hill, NC 27599, or by returning the designated card included in the application for admission materials.

SCHOLARSHIPS

A limited number of scholarships based on need and/or merit are awarded each year by the School of Law. Accepted applicants automatically are considered for merit scholarships. Applicants or students applying for need-based scholarships must submit an FAF to the College Scholarship Service.

Endowed Scholarships

Aycock-Poe Scholarship
Bicentennial Challenge Scholarship Fund
Thornton H. Brooks Memorial Scholarship
Barry S. Brown Memorial Scholarship
E. S. W. Dameron Scholarship
James E. Davis, Jr., Memorial Scholarship
Franklin T. Dupree, Sr., Memorial Scholarship
Nicholas T. and Alma S. Goudes Scholarship
Wallace R. Gray Scholarship
Mildred M. and William A. Johnson Scholarship
Ted C. Leonard, Jr., Scholarship
Charles S. Mangum, Jr., Scholarship
L. A. Martin Scholarship
W. Ellis Meehan Scholarship Fund
Naomi E. Morris Memorial Scholarship
North Carolina Soft Drink Association Fred O. Bowman Scholarship
Augustus Barker Raymer Memorial Scholarship
The Nancy K. Rhoden Scholarship
Seawell Scholarship
Chief Justice Walter Parker Stacy Scholarship Fund
W. Frank Taylor Scholarship
J. Nelson Young Scholarship

Other Scholarships

Henry P. Brandis, Jr., Law Alumni Association Scholarship
Donald and Elizabeth Cooke Foundation Scholarship
Albert Joseph Ellis Scholarship
Maurice T. Van Hecke Law Alumni Association Scholarship
Robert Hasley Wettach Law Alumni Association Scholarship
Law Foundation Scholarships
Hunton & Williams Scholarship
Minority Presence Grant Program for Law
Public Interest Law Fellowships
Student Stores Scholarships
Tuition Deposit Scholarships

Minority Presence Grant Program

Under the Board of Governors general Minority Presence Grant Program, black students may be eligible for special financial assistance if they are residents of North Carolina, enrolled for at least three hours of degree-credit coursework, and demonstrate financial need.

Loans

Applicants for admission or enrolled students can obtain applications for Stafford Loans and loans not based on need, such as Supplemental Loans and Law Access Loans, from the UNC-Chapel Hill Office of Scholarships and Student Aid, participating banks, College Foundation (restricted to residents of North Carolina; contact the Office of Scholarships and Student Aid for information), and Law Access, Box 2500, Newtown, PA 19840. Those interested in need-based loans must submit an FAF to College Scholarship Service by March 1 and have Financial Aid Transcripts sent to the Office of Scholarships and Student Aid from the student aid offices of their undergraduate institutions.

Students are required to meet federal and University financial need eligibility requirements for loans.

The Student Bar Foundation, a student organization, awards loans to a limited number of students who demonstrate substantial financial need. Applications may be obtained during the academic year from the Foundation office in the law school.

An emergency loan fund in memory of the late Associate Dean Morris R. Gelblum assists students in temporary financial hardship with small noninterest-bearing loans for short periods of time. In addition, the Office of Scholarships and Student Aid has a limited Emergency Loan Fund from which short-term loans up to $300 can be made in critical situations, with repayment due in not more than ninety days.

Employment

The study of law is a full-time obligation requiring the average student to devote at least 60 hours per week to his or her courses. The law faculty recommends most strongly that students arrange their finances so as to avoid the necessity of outside employment, particularly during the first year. Accreditation standards require that a student may not be employed in excess of 20 hours per week while attending law school on a full-time basis.

For students who must work, a limited number of positions are available in the Law Library. Inquiries should be addressed to the Librarian. A number of second- and third-year students work as research assistants within the school. Notices of these opportunities are posted as they become available. Students may be employed by the University as residence hall counselors. Information and applications may be obtained from the Office of Residence Life, Carr Building, CB# 5500.

North Carolina Lawyers' Research Service is a student-run, nonprofit corporation fulfilling two purposes. Paid student researchers, primarily second- and third-year students, gain experience in legal research aimed at actual situations and in dealing with attorneys for whom they are working. Practicing attorneys have a resource in the law school where, for minimal fees they can have specific areas of the law researched and summarized in a memorandum geared especially to the facts of their cases.

The Student Aid Office is the central location where notices of campus and community job opportunities are posted in the stairwell of Vance Hall. Such jobs are negotiated independently with employers on and off campus.

Students find that Carolina's beautiful campus is the perfect atmosphere for creating friendships and preparing for a career.

ACADEMICS

THE LAW CURRICULUM

THE FIRST YEAR

All first-year courses are required.

CIVIL PROCEDURE

Law 201–202 *3 hrs, fall; 3 hrs, spring*

A comprehensive survey course. Attention is paid to the historical evolution of the Anglo-American procedural systems into the major contemporary American types, with emphasis placed upon study of the latter. Pleading, parties, joinder, discovery, pretrial regulation, summary judgment and other disposition without trial, conduct of trial, jury selection, evidence assessment motions, jury instruction, verdicts, judgments, appellate review, res judicata. *Boger, Broun, Conley, Gibson, Louis.*

CONTRACTS

Law 203–204 *3 hrs, fall; 3 hrs, spring*

Offer and acceptance, consideration, assignment, third-party beneficiaries, express and implied conditions including material on each and some brief study of mistake, quasi-contract, the parole evidence rule, impossibility, the Statute of Frauds and related matters. *Blakey, Broome, Brown, Hazen.*

CRIMINAL LAW

Law 205 *3 hrs, fall*

Principles of criminal law and the role of the criminal law in society; its scope, limitations, justifications, and idiosyncrasies. *Bilionis, Loewy, Rosen.*

PROPERTY

Law 207–208 *3 hrs, fall; 3 hrs, spring*

Introduction to estates in land and future interests, the doctrine of the use; the modern impact of English feudalism. Concurrent estates, Landlord-tenant rights and remedies. Land sale contracts; the statute of frauds, construction of contracts, equitable conversion. Conveyance by deed; delivery, escrows, construction. The recording system and the chain of title. Adverse possession. Title covenants and title insurance. Creation, scope, and termination of easements and covenants affecting land. Regulation of the use of land; nuisance, zoning, subdivision, regulation, and eminent domain. *Kalo, Link, Orth, Solari.*

TORTS

Law 209–210 *3 hrs, fall; 3 hrs, spring*

Broad coverage of common law and statutory principles governing compensation for personal injury, property damage, and other harm. Specific areas of study include: intentional torts, negligence, wrongful death, worker's compensation, liability related to animals and abnormally dangerous activities, products liability, nuisance, misrepresentation, defamation, and privacy. *Byrd, Corrado, Daye, Hornstein, Yarbrough, Zelenak.*

RESEARCH, REASONING, WRITING, AND ADVOCACY

Law 295 *1 hr. fall*

Instruction and assignments in legal bibliography and tools of research. Students must complete two brief writing assignments. Additional work to insure writing competence may be required in individual instances. This course provides the basis for the spring semester Legal Research and Writing course. *Coggins, Staff.*

LEGAL RESEARCH AND WRITING

Law 296 *3 hrs, spring*

A comprehensive introduction to legal research and writing. Students are required to complete an extensive memorandum of law and a moot court brief and to make an oral moot court argument. Additional work to insure writing competence may be required in individual instances. Emphasis is placed on legal analysis, synthesis, and effective legal writing. *McKinney, Staff.*

ADVANCED COURSES

All courses of study in the second and third years are elective except that each student must take the course in Professional Responsibility, a second-year writing small section, and a seminar. Certain courses are considered foundation courses because they provide the vocabulary and structure for advanced legal work, whether that work be in law school or in practice. Accordingly, those courses which provide the background necessary for most curriculum paths are recommended to and scheduled primarily for the convenience of second-year students.

Second-year foundation courses include Business Associations, Constitutional Law, Criminal Procedure: Investigation, Evidence, Income Taxation, Professional Responsibility, Trusts and Estates I and II (or Probate). Third-year foundation courses include Administrative Law, Sales and Secured Transactions and at least one broad perspectives offering.

Students should plan a program of 10–15 hours of credit in each semester of the last two years. Eighty-six hours of credit are required for graduation.

Courses and seminars described below which indicate a semester and instructor will be offered in the 1992–93 school year. Other listings describe courses which have been offered in recent years and may be offered in subsequent years dependent upon staffing. The School of Law reserves the right to withdraw and add courses or change course content at any time.

ADMINISTRATIVE LAW

Law 220 *3 hrs, fall and spring*

The law governing the operation of administrative officers, boards, bureaus and commissions; their procedure; their exercise of powers, legislative and judicial in nature; and the role of the courts on judicial review of administrative decisions. *Hornstein, Powell.*

Admiralty

Law 222 — *3 hrs*

Maritime jurisdiction, torts, contracts and possessory libels; seamen's rights; carriage of goods, maritime liens; charter parties; salvage; general average; collision; limitation of liability and marine insurance.

Advanced Family Law

Law 247 — *3 hrs, spring*

Study of important subjects not covered in the basic family law course including issues involving children, rights of unmarried parents and their children, intervention by the state into private family relationships, child abuse and neglect, voluntary and involuntary limits on reproduction, adoption, and study (using both drafting and problem exercises) of private versus public ordering issues arising out of separation and prenuptial agreements. *Sharp.*

Antitrust Law

Law 226 — *3 hrs, fall*

An examination of the federal antitrust laws, specifically the Sherman Act, the Clayton Act (excluding the Robinson-Patman Act) and the Federal Trade Commission Act. The course concentrates on the sources and abuses of market power and the ways in which competitors may combine or agree with each other or their customers or suppliers to limit or restrain competition. Although the economic and business aspects of these problems are closely studied, the underlying principles are provided in the course and casebook. Consequently, an undergraduate background in these areas is unnecessary. Students who have taken the course in Trade Regulation, which surveys many of the same areas, may not take this course. *Louis.*

Banking Law

Law 237 — *3 hrs*

The subject of this course is the government regulation of banks and other financial institutions, both at the federal and state levels. The course will focus on the legal structure of the industry, the formation and geographic expansion of banks, bank holding companies, and limited service banks, regulations relating to loans and other investments, expansion of bank activities into nonbanking areas, and international banking.

Bioethics and Law

Law 221 — *2 hrs*

The ethical and legal problems of expanding biological technology, such as experimentation and research, control of mind and behavior, genetic control, reproductive control, death control, and organ transplantation.

Business Associations

Law 228 — *4 hrs, fall and spring*

An introduction to the law of corporations with supplemental attention given to partnership and agency law. Most of the course is devoted to an examination of the structure, control, and characteristics of the modern business corporation. It focuses on the organization of corporations, the distribution and exercise of powers of stockholders, directors, and officers, and the enforcement of corporate duties. It also considers some basic concepts of the law of agency and some aspects of partnership law. *Clifford, Hazen, Markham.*

Children & the Legal System

Law 273 — *3 hrs., fall*

This writing section covers child protection (including abuse, neglect, removal, and termination of parental rights); status offenses; medical care of children; and possibly selected issues concerning education of children. *Nelson.*

Civil Legal Assistance Clinic

Law 391 — *6 hrs, fall-spring*

Students represent indigent clients under direct faculty supervision. Cases may include landlord-tenant disputes, consumer claims, and government benefit claims. Students interview clients and witnesses, negotiate with opposing parties and their attorneys, prepare and argue legal motions, and conduct all trials and hearings. This is a two-semester course and is open only to third-year students. Enrollment is limited to facilitate supervision. Students entering the Civil Legal Assistance Clinic must also register for Lawyering Process—Civil in the fall. Prerequisite: Trial Advocacy (may be taken concurrently). *Ratliff, Stancill.*

Commercial Paper

Law 264 — *2 hrs*

The form and the legal and commercial advantages of negotiable instruments (promissory notes and checks); their use in consumer and commercial credit transactions; the conceptual devices including the concept of the holder in due course, by which the goal of protecting the interest of consumer and commercial debtors is reconciled with the goal of providing low cost credit. Analyzes the devices by which losses occasioned by the theft and alteration of negotiable instruments are allocated among the parties to these instruments, and similarly analyzes the allocation of losses occasioned by the insolvency of a party. Articles Three and Four of the Uniform Commercial Code are studied in depth.

Comparative Law

Law 230 — *3 hrs, spring*

Survey and analysis of the substantive and procedural characteristics of the world's major legal systems, with attention to their history, sources and current trends. *Corrado.*

Conflict of Laws

Law 232 — *3 hrs, fall*

A study of the rules applicable in private law where at least one of the elements in the case is connected with some state or country other than the one in which suit is brought. The course is often described as private international law. Areas considered include problems of domicile, characterization and conflict rule formulation, the recognition and enforcement of judgments of sister states and foreign countries; constitutional limitations on legal solutions to interstate transactions; and the criteria for choice of law in multistate tort, contract, workmen's compensation, property, family law, and business organization situations.

Emphasis is placed on practical applications to tort and business litigation with interstate aspects. *Weisburd.*

Constitutional Law

Law 234 *4 hrs, fall and spring*

Judicial review of constitutional issues. The allocation of power between the state and federal governments, and the separate branches of the federal government. The limitations upon either government imposed by specific prohibitions, such as the First and Fourteenth Amendments. *Boger, Levin, Loewy.*

Constitutional Law

Law 234A–234B *6 hrs*

This year-long, six-hour course may be elected in lieu of the one-semester, four-hour course in Constitutional Law. Covers the same materials in greater depth and breadth and with more attention to current Supreme Court decisions and trends than possible in the four-hour course. Students have term paper option. Registration for four-hour course precludes registration for either semester of this course.

Constitutions and the Criminal Process

Law 211 *3 hrs, spring*

An advanced course in American constitutional law as it bears upon the criminal process, examining the respective roles of federal and state constitutions, the problems posed by judicial review in a federal system, and the techniques courts employ to meet those problems. Prerequisites: Constitutional Law, and either Criminal Procedure: Investigation or Criminal Procedure: Adjudication. *Bilionis*

Constitutional Tort Litigation

Law 248 *3 hrs. spring*

The major focus of this course is the "constitutional tort" or "public tort" cause of action, under 42 USC Section 1983 and Bivens, that citizens may invoke to seek monetary damages (and other forms of relief) for deprivations of federally protected rights caused by public officials or by the government itself. The subjects include state action doctrines; theories of individual and official liability; official and sovereign immunity doctrines; scope and limitations on appropriate forms of relief; and the limits of the Section 1983 and Bivens causes of action when analogous state causes of action or other federal remedial schemes may be available. *Saunders.*

Consumer Law

Law 235 *2 hrs, spring*

Introduction to selected legislative, administrative, and judicial developments relating to disclosure of information and curbs on deceptive and abusive practices. There will be a particular focus on the federal Consumer Credit Protection Act, state retail installments sales acts, and federal and state laws relating to unfair and deceptive trade practices. *Clifford.*

Corporate Finance

Law 236 *3 hrs, spring*

An advanced course in the law of corporations, being an examination of various aspects of corporate finance and means of effecting basic corporate changes. Considers types of securities, distributions to stockholders, and corporate acquisitions, mergers, recapitalizations, and charter amendments. Prerequisite: Business Associations. *Markham.*

Criminal Law Clinic (year-long)

Law 390 *6 hrs, fall-spring*

Students represent defendants and convicted prisoners under direct faculty supervision. Typical cases involve misdemeanors, juvenile cases, and probation revocation hearings in district and superior courts and parole hearings at the federal correctional institution at Butner, North Carolina. Students interview clients and witnesses, negotiate with prosecutors, prepare and argue legal motions, and conduct all trials and hearings. The course must be taken for two semesters and is open to third-year students only. Enrollment is limited to facilitate supervision. Students entering the Criminal Law Clinic must also register for Lawyering Process—Criminal in the fall. Prerequisites: Criminal Procedure: Investigation, Trial Advocacy (may be taken concurrently); Criminal Procedure: Adjudication is strongly recommended. *Larimer, Robertson.*

Criminal Law Clinic (semester)

Law 395–396 *3 hrs. fall or spring*

Students represent defendants and convicted prisoners under direct faculty supervision. Typical cases involve misdemeanors, juvenile cases, and probation revocation hearings in district and superior courts and parole hearings at the federal correctional institution at Butner, North Carolina. Students interview clients and witnesses, negotiate with prosecutors, prepare and argue legal motions, and conduct all trials and hearings. The course is open to third-year students only. Enrollment is limited to facilitate supervision. Students taking the fall Criminal Law Clinic also must register for Lawyering Process—Criminal in the fall. Prerequisites: Criminal Procedure: Investigation, Trial Advocacy (may be taken concurrently); Criminal Procedure: Adjudication is strongly recommended. *Larimer, Robertson.*

Criminal Procedure: Adjudication

Law 225 *3 hrs, spring*

Includes subjects such as institution and screening of criminal charges (grand jury, preliminary hearing, prosecutorial discretion); joinder and severance; pretrial release; prejudicial publicity; jury trial; privilege against self-incrimination; guilty pleas; speedy trial; confrontation and compulsory process; right to counsel; contempt; sentencing; double jeopardy; appeal; postconviction challenges. *Nakell.*

Criminal Procedure: Investigation

Law 206 *3 hrs, fall and spring*

The scope and limitations of permissible law enforcement conduct in the investigation of crime. Principal areas of coverage include search and seizure, police interrogation, and procedures for the identification of suspects. *Bilionis, Loewy, Nakell, Rosen.*

Debtor-Creditor Relations

Law 238 *3 hrs, spring*

A study of the practical and legal dynamics of insufficient assets situations. What problems and conflicts arise for all concerned when one person's assets are not sufficient to meet the claims of all creditors? How does the law cope with these problems, resolve these conflicts and on what terms does it offer relief to debtors and afford remedies to creditors? The organizing doctrine of the course is the Federal Bankruptcy Code, and state-created creditor remedies and debtor relief devices are studied in this context both for their own importance and as they are affected by bankruptcy. *Gibson.*

Dispute Resolution

Law 219 *3 hrs*

Examines the dynamics, advantages, and disadvantages of numerous techniques, other than litigation in the courts, for resolving disputes in a variety of contexts. Some attention is given to negotiation, but primary emphasis is on processes involving the use of third-party neutrals, such as mediation, arbitration, mini-trials, rent-a-judge, ombudsmen, etc. Principal component of the course is arbitration.

Employment Discrimination

Law 243 *3 hrs, spring.*

A study of the legal protection against discrimination on the basis of race, sex, religion, age, national origin, and handicap in public and private employment. *Murphy*

Environmental Law

Law 241 *3 hrs, spring*

A survey of national environmental law and policy. Particular topics may include water resources development, water and air pollution control, public land use policy, governmental regulation of the use of private lands, protection and use of the land-water margin, pesticide and toxic substance regulation, and solid wastes policy. *Hornstein.*

Evidence

Law 242 *3 hrs, fall and spring*

Witnesses, examination, competency, and privilege. Rules of exclusion; evidence illegally obtained; opinion evidence; the hearsay rule and its exceptions. Rules as to writings, evidence of authenticity; best evidence rule. Remote and prejudicial evidence. Character and reputation. Judicial notice. *Bilionis, Blakey, Broun.*

Evidence, Advanced

Law 227 *3 hrs*

Advanced study of basic topics covered in the beginning evidence course, including hearsay, expert testimony, and character, as well as presumptions, judicial notice, privileges, and constitutional issues concerning hearsay. Small-group courtroom role play exercises are used. Prerequisite: Evidence.

Family Law

Law 244 *3 hrs, fall and spring*

A survey of the legal doctrines and policies concerning the creation, termination, and incidents of certain statuses: principally, spouse, parent, and child. The greatest portion of the course is devoted to the dissolution of marriage and the concomitant allocation, by contract or operation of law, of family wealth and child custody. Other topics include contracts in lieu of marriage; common law marriage; interstate and international aspects of family law; individual autonomy versus governmentally sanctioned morality; family autonomy versus governmental protection of family members, especially children. *Greene, Sharp.*

Federal Jurisdiction

Law 246 *3 hrs, fall and spring*

Functionally, a study of the judicial federalism. Central emphasis is given to the original and removal jurisdiction of the Federal District Courts, with attention also given to the appellate jurisdiction of the United States Court of Appeals and to the original and appellate jurisdiction of the Supreme Court of the United States. Conflicts between the federal and state judicial systems, and legislative and judicial efforts to resolve them, receive special attention. *Gibson, Louis.*

Gender-based Discrimination

Law 281 *3 hrs.*

An overview of various areas of the law in which men and women are treated differently. Focus is on outmoded sexual stereotypes embodied in laws and regulations and the attitudes existent in the judicial system. Areas of study include the constitutional standard of review for gender discrimination, feminist jurisprudence, family roles, domestic violence, employment, criminal law and the criminal justice system, credit, and education.

Health, Law, and Public Policy

Law 251 *3 hrs*

An overview of the law as it relates to the health services delivery system. Includes the financing of health services, the role of the government in protecting and promoting health, the relationship between providers and consumers of health services, a review of current public policy issues such as national health insurance, government regulation of the distribution of health-related resources, and limitations on scientific and medical research.

Housing

Law 255 *3 hrs, spring*

Analysis of legal, social, political, and economic policies that motivate, shape, constrain and govern the process of addressing housing and development needs at the federal, state and local levels. Topics include the legislative, administrative and judicial process for major housing and community revitalization programs; issues and limitations presented by the intergovernmental framework for programs; the constitutional, statutory and legal bases governing tenants' and property owners' rights; constitutional and statutory bases for equal opportunity access to housing. *Daye.*

Immigration Law

Law 214 — *3 hrs, spring*

This course explores the American immigration system from an historical, constitutional, statutory, political, and policy standpoint. The course surveys United States immigration law and policy and the mechanisms for its creation and enforcement, including the roles of the Departments of Justice and State, the Immigration and Naturalization Service, and judicial review of agency decisions. Topics vary from semester to semester, and may include the source and scope of congressional power to regulate immigration; procedures for entry, exclusion, and deportation of aliens; refugee and political asylum law; problems with temporary workers, business visitors and tourists; current proposals for reform of the immigration process; the problem of undocumented migration; unauthorized mass immigrations; and acquisition and loss of American citizenship. Special emphasis also will be placed on current immigration issues, such as exclusions of aliens on ideological grounds, exclusions of aliens for medical reasons such as AIDS, and implementation of employer sanctions provisions under the Immigration Reform and Control Act of 1986. *Nakell.*

Insurance

Law 250 — *2 hrs*

General principles of insurance, including governmental supervision, property insurance, liability (including automobile) insurance, life insurance, selection and control of risks, marketing, and adjustments of claims.

Intellectual Property

Law 265 — *3 hrs, fall*

The nature of copyright, trademark, patent, and trade secret protection. Circumstances under which each is appropriate and the steps necessary to secure, maintain, and enforce each form of protection. Considerable emphasis on adapting traditional intellectual property concepts to technology. *Gasaway.*

International Business Transactions

Law 279 — *3 hrs, fall*

Addresses the major features of the legal environment of international business, including trade regulation and policy, extraterritorial jurisdiction, commercial arbitration, mixed public/private transactions, and conflict of laws. *Markham.*

International Law

Law 252 — *3 hrs, fall*

Concentrates on practical problems of international law. Subjects considered include sources and development of international law; treaty making, interpretation, enforcement and termination; recognition; territory; nationality; jurisdiction and immunities; state responsibility and international claims; and the law of war and neutrality. *Weisburd.*

International Litigation

Law 289 — *3 hrs, spring*

This course covers the following issues related to international litigation: jurisdiction, mechanics of obtaining service abroad, gathering evidence abroad, different methodologies for gathering evidence in foreign jurisdictions, appellate procedures, litigation abroad, alternative dispute resolution, mechanisms, choice of law and forum, evidence gathering by United States government agencies, and world court proceedings. *Markham.*

Interviewing, Counseling, and Negotiation

Law 277 — *3 hrs, spring*

Taught largely through role play assignments in which students perform as lawyers, clients, and witnesses and through research, readings, and a series of papers concerning these performances and their implications. Because the interviewing, counseling, and negotiation cannot take place in a vacuum, this course also involves advanced legal research, evidence, and professional responsibility. *Blakey, Silverstein.*

Judging

Law 215 — *3 hrs. spring*

An examination of the nature of judging within a legal system; introduction to basic principles of making and explaining reasoned choices that decide disputes of "fact" and "law"; consideration of choices as exercises of power guided by sources of authority; tests for legal accountability and related issues of duty and causation, burdens of production and persuasion; statutory construction; jury and nonjury trials; professionalism in judging. *Martin.*

Labor Law

Law 254 — *3 hrs*

Examines unionization and collective bargaining under the National Labor Relations Act, including the rights of employees, employer unfair labor practices, limits on union economic pressure, and the administration of the collective bargaining agreement.

Land Use Control

Law 290 — *3 hrs, spring*

Legal devices to regulate the use of land and to implement land use planning. Emphasis on zoning, subdivision control, historic preservation, and other selected topics. Completion of (or concurrent enrollment in) Constitutional Law is strongly recommended. *Wegner*

Law and Medicine

Law 263 — *3 hrs*

Deals with three broad topics: medical malpractice, structuring a malpractice case, and emerging ethical problems. Subissues include standard malpractice law, including psychiatric malpractice; informed consent; specialty practice; hospital law; problems of medical proof; forensic medicine; psychological impact of malpractice litigation on client, physician, and patient; interviewing techniques; ethical problems facing the legal and medical professions; and issues posed by developing medical technology.

Lawyering Process – Civil

Law 233 — *3 hrs, fall*

A course designed to teach students litigation skills with emphasis on civil practice. Topics covered include counseling, fact and legal investigation, case preparation, negotiation, deposition practice, preparing interrogatories, and conducting pretrial conferences. Taught through simulation exercises and lecture/discussion classes. Open only to students enrolled in the Civil Legal Assistance Clinic. *Ratliff, Stancill.*

Lawyering Process—Criminal

Law 231 *3 hrs, fall*

A course designed to teach students litigation skills with emphasis on criminal practice. Topics covered include interviewing, counseling, fact and legal investigation, case preparation, plea bargaining, bail hearings, discovery, and sentencing advocacy. Taught through simulation exercises and lecture/discussion classes. Open only to students enrolled in the Criminal Law Clinic. *Larimer, Robertson.*

Legal Accounting

Law 256 *3 hrs*

An introduction to the fundamentals of accounting theory and practice and their relationship to the lawyer's function, particularly with respect to commercial, corporate, securities, and tax law. Emphasis is upon the accounting conventions governing the recording of business transactions, the determination of income, allocation of costs and expense, and the preparation of financial statements.

Legal History

Law 259 *3 hrs, spring*

An introduction to historical ways of thinking about the law and legal development. Emphasis will be placed on the "modern" history of the common law, in England since Blackstone and in America since the Revolution. Prior historical study is not a prerequisite. *Orth.*

Local Government Law

Law 257 *3 hrs*

An examination of the powers of and constraints upon local and state governments. Organization of local governments, including incorporation and annexation; state and local regulatory and fiscal powers and limitations; public officers and employees; liability under state and federal law; voting rights and problems of school finance. Does not overlap with coverage in Land Use Control.

Ocean and Coastal Law

Law 262 *3 hrs, fall*

A study of legal doctrines, policy choice, and policy evaluation relating to the allocation and use of ocean and coastal resources. Areas of emphasis include international, national, and state law pertaining to marine pollution; energy production through utilization of outer continental shelf oil and gas reserves; thermal energy conversion and other methods; the utilization of fish stocks and other food resources of the oceans; the exploitation of mineral resources; waste disposal; and the problem of preservation of the ecological and physical processes of the marine environment and the coastal zone. *Kalo.*

Philosophy of Law

Law 292 *3 hrs, fall*

Introduction to problems in the philosophy of law, under four general headings: (1) justification (utilitarian and nonutilitarian theories of punishment; fairness and utility in tort law; the normative economic approach to remedies); (2) responsibility and action (actions and omissions; causation; mental states; attempts; insanity); (3) rights (nature of rights; harm; limits of the law); and (4) legal reasoning (the role of logic in legal decision-making; precedent; judicial discretion; hard and easy cases). *Corrado.*

Probate Law

Law 293 *3 hrs, fall and spring*

An introduction to the law of intestate succession, wills, trusts, future interests, and administration, approached from the perspective of the planner and drafter. Although some tax matters are considered, the course focuses on typical small to medium-sized estates in which federal tax problems do not predominate. The course is a substitute for Trusts and Estates I and II for students who do not expect estate planning or real estate titles to be significant areas of interest, but who want some acquaintance with issues that arise in wills, trusts, and future interests. It is not open to those who have taken Trusts and Estates I and II. *Link.*

Professional Responsibility

Law 266 *2 hrs, fall and spring*

The lawyer's obligation to clients, the courts, and the public. The organization and ethics of the legal profession including the qualification, admission, and discipline of lawyers. *Broun, Logan, Powell, Yarbrough.*

Professionalism and Morality

Law 266M *3 hrs, fall*

This course includes coverage of the legal professional codes, with additional emphasis on the content of morality, the resolution of moral conflicts, the moral analysis of the professional codes, and the definition of professionalism. (May be taken in lieu of law 266, the standard course in professional responsibility, in satisfaction of the professional responsibility requirement for graduation). *Haskell.*

Psychiatry and the Law

Law 260 *3 hrs, spring*

Focuses on three issues: the manner in which psychiatric concepts and techniques can be used to understand the motivation and actions of clients; the legal issues created by delivery of services to the mentally ill in both civil and criminal settings; and the role that mental health professionals play in the legal system. The course is taught by a psychiatrist and emphasizes discussions of general concepts and controversies rather than specific case analyses. *Halleck.*

Race and Gender

Law 297 *3 hrs, spring*

This course involves comparison of race, gender, and other invidious discriminatory practices as they affect social and economic activities; an examination of how legal rules and institutions have helped to maintain or eliminate American societal hierarchies based on race and gender and whether these rules and institutions might play a different role in the future; the meaning of privilege, subordination/oppression; the implications of the intersection of race and gender. *Yarbrough.*

Race and Poverty: Some Constitutional Dimensions

Law 249 *3 hrs, spring*

The exploration of certain developments in constitutional doctrine affecting the legal status of racial minorities and the poor from post-Civil War era to the present. Review of controversies surrounding adoption of the Fourteenth Amendment, focusing on the intent of those who framed, and others who opposed, the Equal Protection Clause; how the Supreme Court initially applied that Clause during the latter nineteenth and early twentieth centuries; judicial expansion of Fourteenth Amendment protection for black citizens in post-World War II era; present difficulties that poor and minority citizens face in attaining equal educational opportunities; and how constitutional and statutory law assists, or inhibits, these groups in achieving a minimally adequate education. *Boger.*

Real Estate Finance

Law 270 *2 hrs, fall*

The law of real property security, including an examination of mortgages, deeds of trust, and mortgage substitutes. Topics such as priorities among security interests; rights on default and foreclosure; deficiency judgments; mechanics' liens; and the secondary mortgage market will be considered. *Peeples.*

Real Estate Practice

Law 275 *2 hrs, spring*

Problems and practices in representing the vendor or purchaser of various kinds of real estate, with emphasis on single-family, residential transactions. Contracts, options, surveys, descriptions, title examination, title objections, opinions on title, title insurance and coverage, closing documents, closings, ethical considerations. Students will prepare various instruments and conduct representative transactions. Enrollment is limited to 20 students. *Harllee.*

Remedies

Law 274 *3 hrs, fall*

Coverage includes remedies in equity, restitution, and damages; the substantive principles of equity and restitution; and the influence of remedy and substantive law upon each other. Coverage of the damage remedy includes its goals and basic premises, the elements and measure of recovery, limitations upon recovery, and various types of punitive awards. Coverage of equitable remedies includes limitations upon the exercise of equitable jurisdiction and such traditional equitable remedies as specific performance, injunction, reformation, and rescission. Both the substantive and remedial aspects of restitution are examined. Considerations affecting the availability of and choice among remedies are explored. *Byrd.*

Sales and Secured Transactions

Law 276 *4 hrs, fall and spring*

Coverage in depth of the sale of goods and secured transactions involving personal property and fixtures. Formation of the contract of sale warranties, performance obligations, risk of loss, default, monetary and other remedies. Creation and perfection of security interests, priorities, and remedies upon default. *Broome, Broun, Clifford.*

Scientific Theory and Method for Lawyers

Law 291 *3 hrs, spring*

A course designed to acquaint nonspecialists with some of the scientific principles that are playing an increasingly important role in the resolution of legal disputes. Discussion, lecture, problems, and simulation will be used to introduce such broadly applicable scientific principles as hypothesis building and testing, probability, statistical inference, and the experimental method. Examples will be drawn from diverse disciplines, including engineering, economics, statistics, psychology, and anthropology. Emphasis on general problems with scientific expert testimony. No scientific background required. *Conley.*

Securities Regulation

Law 278 *3 hrs, spring*

A comprehensive and intensive survey of the statutes and regulations governing the distribution of securities, trading of securities on the stock exchanges and the over-the-counter markets, the regulation of broker-dealers, and the growing role of institutional investors. Primary focus is placed upon the Securities Act of 1933 and the Securities Exchange Act of 1934, with limited attention to state "Blue Sky" securities legislation. Prerequisite: Business Associations (may be taken concurrently). *Hazen.*

Securities Regulation

Law 278W *4 hrs, spring*

This course will be made available to both second- and third-year students. Up to 12 second-year students may elect to take the course as a second-year small section. Second-year students participating on this basis will meet an additional hour per week, and will be required to complete short writing exercises including drafting an opinion letter, selected disclosure documents, and perhaps a time table and check-list for a securities offering. Business Associations is a prerequisite. 3 hours generally; 4 hours for second-year students enrolled in small section writing program. *Hazen.*

Sports Law

Law 200 *3 hrs, spring*

This course considers the interaction of the legal system and particular topics in sports, including contractual and business obligations, antitrust aspects of professional sports, regulation of agents, drug testing, sports violence, labor relations, the National Collegiate Athletic Association and the regulation of intercollegiate sports, regulation of amateur sports, and gender discrimination in athletics; contract, antitrust, labor, tort, professional responsibility, and constitutional law issues will be explored. *Yarbrough.*

Taxation, Corporate

Law 284 *3 hrs, fall*

Taxation of corporations, corporate dividend and liquidating distributions, corporate organizations and reorganiza-

tions. Prerequisites: Income Taxation, Business Associations. *Zelenak.*

Taxation, Estate and Gift

Law 282 — *2 hrs, spring*

Fundamentals of estate, inheritance, and gift taxation, with applications in estate planning. *Turnier.*

Taxation, Income

Law 280 — *3 hrs, fall and spring*

A study of basic legal problems involved in the federal and state income tax laws, together with a brief examination of income tax procedure. *Bryan, Turnier, Zelenak.*

Taxation, Partnership

Law 287 — *2 hrs, spring*

Coverage of the taxation of partnerships as well as the taxation of small corporations electing S status. Prerequisite: Income Taxation. *Bryan.*

Technology and Intellectual Property

Law 271 — *3 hrs*

An examination of the application of intellectual property law to contemporary technological issues. Brief survey of patent, copyright, and trade secret law, followed by analysis of several problems, including managing employment relations in technology companies, and protecting proprietary interest in computer hardware and software and biotechnology. No prerequisites, but may be taken in sequence with Intellectual Property.

Trial Advocacy

Law 288 — *3 hrs, fall and spring*

A study of the trial as part of the legal system. Class members will participate in demonstrations of various trial and pretrial proceedings. Successful completion of the course in Evidence is a prerequisite. Enrollment limited to 18 students in each section. *Becton, Billings, Broun, Fuller, Hill, Johnson, Maher, McAllaster, Mills, Ratliff, Rudolf.*

Trusts and Estates I and II

Law 268–269 — *3 hrs, fall; 3 hrs, spring*

This course deals with the principles and problems of the transmission of wealth from generation to generation. It examines the law of wills, trusts, fiduciary administration, and modern future interests. *Haskell.*

SEMINARS

All students must take at least one seminar in order to graduate, and it is recommended that students take two seminars. Second-year students are eligible for admission to any seminar which is not filled by third-year students.

As an alternative, the seminar requirement may be fulfilled by successful completion of seminar credit work in an elective course in which the instructor has elected to offer the option to a limited number of students for "seminar credit." Conditions and guidelines for each such offering are posted by the instructor not later than the third meeting of the course, and written permission of the instructor must be obtained by the student.

Administrative Law

Law 375 — *3 hrs*

Students undertake in-depth studies of specific problems in administrative law or in-depth studies of particular administrative agencies. Emphasis is placed on combining legal research and field research with a view to applying administrative law concepts to analyze specific problems or to study specific agencies. Prerequisite: Administrative Law, except by permission of professor.

Appellate Defender

Law 392 — *3 hrs*

Students represent convicted defendants under direct faculty supervision. Typical cases involve appeals in the North Carolina appellate courts. Students interview clients, read trial transcripts to discover errors, prepare records on appeal, research legal issues, and write briefs on the defendants' behalf. Enrollment is limited to facilitate supervision. Prerequisites: Evidence and Criminal Procedure: Investigation. Trial Advocacy and Criminal Procedure: Adjudication are strongly recommended.

Banking Law

Law 337 — *3 hrs*

The focus is government regulation of banks and other financial institutions, both at the federal and state levels. Students engage in intensive statutory and regulatory review, research, writing, and discussion of the changing nature of banking with emphasis on the geographic expansion of banking and new products offered by banks and other financial institutions.

Bioethics and Law

Law 338 — *3 hrs*

Bioethics and the Law is a philosophical and legal exploration of dilemmas raised by new medical technology. Topics considered include informed consent to medical treatment; refusal of treatment by competent patients (and standards for competency); treatment decisions (especially terminating treatment) for the comatose or other incompetent patients (including infants); abortion; maternal/fetal conflicts; "wrongful life;" and other issues raised by new technology in pregnancy and birth.

Business Planning

Law 305 — *3 hrs, spring*

A study of the organization, operation, and reorganization of business corporations in terms of selected problem areas in corporation law, securities regulation and taxation. Emphasis is placed on the solving of realistic and practical problems of business planning. Business Associations and Corporate Taxation are prerequisites or may be taken concurrently. Securities Regulation is helpful but not required. *Abel.*

Capital Punishment

Law 306 *3 hrs*

An examination of the development of modern capital punishment law in the United States. Each student will select a particular issue related to the scope of the seminar for intensive study culminating in a seminar paper.

Children & the Legal System

Law 346 *3 hrs*

This seminar covers child protection (including abuse, neglect, removal, and termination of parental rights); status offenses; medical care of children; and possibly selected issues concerning education of children.

Constitutional Adjudication

Law 310 *3 hrs, spring*

Seeks to simulate the constitutional adjudicative process by acting as the "Supreme Court." It considers cases to which the seminar has granted certiorari. Two students argue each case; the remaining students and the instructor act as the court. Writing assignments consist of majority, concurring, and dissenting opinions assigned by the instructor in his role as chief justice. Prerequisites: Constitutional Law and Criminal Procedure: Investigation. *Loewy.*

Constitutional History

Law 364 *3 hrs*

This seminar examines the early development of American constitutional discussion from the ratification of the federal constitution, to the eve of the Jacksonian era. Readings include congressional debates, presidential documents, newspaper essays, and judicial opinions. Among the substantive constitutional themes discussed are federalism, judicial review, freedom of speech, and the constitutional protection of personal liberty.

Constitutional Law

Law 312 *3 hrs*

Research, writing, and discussion of topics in basic constitutional law or briefs and oral arguments of cases before the United States Supreme Court.

Constitutional Theory

Law 314 *3 hrs, fall*

A consideration of the broad theoretical perspectives underlying, or competing for attention in, our system of constitutional government. The seminar considers the intellectual and historical origins of various provisions of the Constitution in light of the subsequent general development of those provisions and contemporary philosophical commentary on the role of the Constitution. The seminar may study the relevant classical texts of Hobbes, Harrington, Locke, Hume, Mill, Montesquieu, and John Adams, as well as the Federalist and Anti-Federalist papers. It also may study the more modern works of Bailyn, Bickel, Ely, Epstein, Nagel, and Wood. It may consider the biographies of jurists who played major roles in the development of constitutional theory or interpretation. Finally, it may focus on particular issues as case studies, such as the concept of the constitution as supreme law, judicial review, or the religion clauses. *Nakell.*

Consumer Law

Law 359 *3 hrs, fall*

This seminar focuses on research, writing and discussion of specific issues in consumer law. The area of study varies from year to year. Possible areas include the federal Consumer Credit Protection Act, state retail installment sales acts, and federal and state laws relating to unfair and deceptive trade practices. *Clifford.*

Corporate Law

Law 331 *3 hrs, spring*

Research, writing, and discussion on selected topics in the field of corporate law. Prerequisite: Business Associations. *Taylor.*

Criminal Law & Procedure

Law 372 *3 hrs*

The seminar explores how external policy concerns—factors other than those traditionally associated with the criminal process—can, and seemingly do, shape the law of crimes and procedure. Among other things, the seminar will consider the influence that issues such as racial prejudice, the separation of powers, and federalism have on judges and the laws they formulate.

Estate Planning

Law 315 *3 hrs, fall*

Individual investigation and reports on problems in property, estate, trust, future interests, insurance, and tax law in relation to the arrangement and disposition of an estate during life and at death. Prerequisites: Trusts & Estates I or Probate; Estate & Gift Taxation; or consent of instructor. *Link.*

Ethical Issues in Trusts and Estates

Law 334 *3 hrs*

Study of current ethical and professional responsibility issues in decedents' estates and trusts, including fiduciary administration. Consideration will be given to professional responsibility and malpractice issues facing lawyers and to ethical and legal considerations affecting nonlawyers such as individual and corporate fiduciaries. A comparative perspective is sought by examining the treatment of similar issues for other professions.

Ethics in Tax Practice

Law 389 *3 hrs*

An examination of questions of legal ethics and professional responsibility, largely (but not exclusively) from the point of view of a lawyer engaged in the practice of federal tax law. Prerequisite: Income Taxation.

European Economic Community

Law 355 *3 hrs, spring*

The European Economic Community (EEC) currently is responsible for over one-third of the world's trade. Internally, it largely limits the social and economic sovereignty of its member states by governing their actions and activities in the areas of customs tariffs, import and export

policy, movement of persons, goods, services, and capital, agricultural policy, transport policy, certain human rights policies, employment law, and commercial policies towards non-member, third countries. In many important ways, the EEC has become a powerful and influential, albeit non-traditional, nation-state. This course seeks to prepare the American law student to work with EEC issues in an academic setting and in a transactional or litigation context. Through a study of significant European Court of Justice decisions and EEC treaties and documents, the course will survey the historical and political origins of the EEC, its federal "constitutional" structure, and the relationships among the institutions of the EEC, its member states, and nonmember, third countries. The course also will survey some of the more important and defined substantive, administrative and procedural laws of the EEC in the areas described above. *Lambelet.*

Family Disputes Resolution

Law 336 — *3 hrs, spring*

Focuses on the adversarial and nonadversarial models for the settlement of domestic problems. Seeks to aid students in developing analytical and other practical skills. Papers are required in the areas of alimony, attorneys' fees, property settlements, separation agreements, child custody, child support, enforcement, and modification of decrees, etc. Practical skills, including interviewing, negotiating and drafting of separation agreements, orders, pleadings, and motions are emphasized. Relevant legal and ethical issues are also considered. *Poole.*

Federal Jurisdiction Tutorial

Law 421 — *2 hrs*

This tutorial, with a limited enrollment of 15 students, is intended as a companion to the Federal Jurisdiction course offered in the fall semester. The tutorial will allow students who are concurrently enrolled in Federal Jurisdiction to explore in greater depth the topics covered in the regular course and to undertake a series of writing assignments involving such topics as standing, sovereign immunity, abstention, diversity, and federal question jurisdiction. Students will be evaluated on the basis of their written work throughout the semester and class participation. Successful completion of this tutorial will satisfy the seminar requirement.

Health Law

Law 317 — *3 hrs, spring*

Participants examine a number of the major problem areas in the health care system of the United States. These include the cost of care and unequal access to it, consent to treatment and terminal care decision-making, organ transplantation, abortion, perinatal drug abuse, the new reproductive technologies, patients' rights, and malpractice. *Dellinger.*

Judicial Process

Law 326 — *3 hrs, spring*

Considers nature and dimensions of law, scope of judicial lawmaking function under various theories about law, choice points in the judicial process, constraints on judicial lawmaking imposed by systemic policies or values, methods of judicial decision-making, behavioral and empirical approaches to judicial process, statutory construction, and justice function of courts. Examines briefly influence of legal education on judicial lawmaking, enhanced status of state constitutions in judicial lawmaking, key individuals in American judicial tradition, and practical aspects of appellate advocacy. Reading assignments from writings of judges, scholars, and court opinions. *Whichard.*

Jurisprudence

Law 320 — *3 hrs*

Underlying every legal doctrine is a philosophical base, which consciously or unconsciously incorporates assumptions concerning the nature of reality, of knowledge, and of language, and the nature of man. The seminar seeks to explore these bases and utilizes a wide variety of sources, including traditional legal material, literature, philosophy, psychology, and sociology.

Law and Economics

Law 313 — *3 hrs*

The first unit of this seminar is an introduction to the methodology used in the economic analysis of law with particular emphasis on the Coase Theorem and competing concepts of efficiency. The second unit is devoted to an examination of the behavioral assumptions implicit in the application of economics to law. The final unit addresses the issue of when, if ever, law should be designed to promote efficient resource allocation.

Law and Literature

Law 347 — *3 hrs, fall*

This seminar focuses on several works of literary merit (including both classics and lesser known works) that raise critical issues involving law, the legal process and the effects of law and the legal process upon individuals and society. Issues considered may include the lawyer's image in America, ethical dilemmas of lawyers, and the ways in which literature reflects and defines our understanding of other people and our notions of justice. The seminar may also consider some works of legal scholars who have considered whether contemporary techniques of literary criticism may be adapted to the interpretation of legal texts. *Bryan.*

Law and Social Science

Law 381 — *3 hrs, fall*

Introduction to social science theories about the resolution of disputes, exploration of the role of social science in investigating our legal process, and consideration of the uses of social science as evidence. The seminar includes review of the writings of anthropologists and other social scientists on the topic of dispute resolution, discussion of a number of contemporary social science approaches to the study of our legal system, including studies of the workings of the jury and the dynamics of courtroom communications, and focus on the potential for use and abuse of social science evidence. *Conley, O'Barr.*

Legal History

Law 303 *3 hrs*

Supervised research and writing on selected topics in Anglo-American legal history, with emphasis on the relationship between doctrinal change and political, social, and economic conditions. Prerequisite: Legal History course.

Legal Issues in Higher Education

Law 332 *3 hrs, spring*

A study of the business operation of and risk management in institutions of higher education. Issues in areas such as employment, admissions, academic freedom, tenure, athletics, student rights, management of institutional funds, intellectual property rights, and university-industry relations are examined within the framework of applicable laws and regulations, institutional rules, academic custom, and societal expectations. *Ehringhaus.*

Legal Theory

Law 382 *3 hrs*

The purpose of the seminar is to acquaint the participants with the culture of the law and to enable them to clarify their own theories of law. Extensive consideration is given to the basic theoretical questions about law: (1) What is law (as distinct from commands, custom, justice, morality)? and (2) What should be the relation of law to justice and morality?

Morality & Law

Law 353 *3 hrs, spring*

This seminar examines the definition of morality and its application to the analysis of legal problems. Prior to the seminar, students will be required to read a short text which presents a survey of moral philosophy. Readings on moral principles and their application to legal problems will be assigned. Each student will be required to write a paper dealing with the application of moral principles to a specific legal problem of his or her choice. *Haskell.*

National Security Law

Law 374 *3 hrs, spring*

A study of separation of powers; the legislative process; military jurisdiction; and civil court reveiw of military actions. Topics to be addressed may include general, imperfect, and covert war; the national security powers of the President and Congress and their roots in the Constitution; the role of the judiciary; government powers in maintaining national security at home; internal security; personnel security; access to national security information under the Freedom of Information Act, etc. *Everett.*

Ocean and Coastal Law

Law 325 *3 hrs, spring*

This seminar focuses on selected problems involving the use of ocean and coastal resources. Among the topics to be considered are the public trust doctrine, protection of wetlands, takings doctrine, the role of the navigation servitude, state coastal development regulation programs, the Fisheries Conservation and Management Act, and calculation of damages in oil and chemical pollution cases. Enrollment in Ocean and Coastal Law is permitted, but is not a prerequisite for this seminar. *Kalo.*

Oral History of Lawyers and Judges

Law 354 *3 hrs, spring*

This seminar is largely devoted to field work in gathering oral histories of selected North Carolina lawyers and judges. Students are instructed in the techniques of gathering and maintaining oral histories. Each student researches and interviews a lawyer or judge, helps refine tapes and transcripts for deposit in the Law Library and the Southern Historical Collection in Wilson Library, and makes an oral presentation to the class and writes a seminar-quality paper on the life story collected. The seminar is designed to bring students in close contact with working lawyers and judges, to expose them to the realities of the problems, opportunities, and personalities actively engaged in the profession, and to preserve what they find for posterity. *Bennett.*

Philosophy of Law

Law 348 *3 hrs, spring*

This seminar deals with the analysis of a single legal concept. Possible topics include responsibility, action, rights, and legal reasoning. *Corrado.*

Political and Civil Rights

Law 316 *3 hrs*

Studies problems of free speech and assembly, of separation of church and state, and of equal protection in light of their recurrence on the current scene. Students write briefs and memoranda about pending cases and pending issues.

State Constitutional Law

Law 385 *3 hrs, fall*

An examination of the role of state constitutions and state courts in the development of constitutional law, judicial review in state courts of constitutional issues arising under federal and state constitutions, interpretation of state constitutions to provide greater protection of citizens' rights than the federal provisions, federal review of state constitutional decisions under the independent and adequate state grounds standard, and separation of powers under state constitutions. *Martin.*

Supreme Court Practice and Appellate Advocacy

Law 311 *3 hrs*

A clinical study of effective advocacy before the US Supreme Court and other appellate tribunals. Emphasis is given to jurisdiction, procedures, and internal operations of the Supreme Court, including the 1980 rule revisions.

Tax Policy

Law 386 *3 hrs, spring*

An examination of what makes "good tax policy," "tax expenditures," and alternate methods of taxation including a more comprehensive income tax, a consumption tax, and the value added tax. The seminar will involve fairly extensive reading as well as written problems for class discussion, some of which have objective answers and some of

which do not. Prerequisite: Income Taxation. Corporate Tax helpful, but not required. *Cummings.*

TAX PRACTICE

Law 388 *3 hrs*

Examination of various procedural, policy, and ethical issues which arise in connection with tax practice. Students also research substantive tax issues in order to become familiar with tax research materials. Prerequisite: Income Taxation. Corporate Tax may be taken concurrently.

TORTS

Law 335 *3 hrs, spring*

Each student is required to write a major research paper. A student may select any topic in the area of tort law or tort remedies. Each student must make an oral presentation and critique another student's work. *Byrd.*

Independent Research

INDEPENDENT RESEARCH

Law 399 *Maximum 3 hrs*

The student pursues an independent research project under the supervision of a faculty member who has a special interest in that area. Consent of the faculty member must be obtained before registering for the course. No faculty member has a duty to accept any proposal. Course credit up to a maximum of 3 credit hours is decided upon by the student and the faculty member before the project is begun. The project is graded in accordance with general law school standards. In no event will the hour credit be increased or decreased after the initial determination of credit. Failure to satisfy the agreed hour credit will call for a grade of "F." Independent research credit may be conferred for a maximum of three hours during a student's law school career. *Faculty.*

Courses in Other University Departments

A student may be granted permission by the Dean to take course work in other graduate divisions of the University for up to three hours of credit toward the law degree upon a showing by the student satisfactory to the Dean or her delegate that the course chosen shall make a significant contribution to his or her legal education. Students must obtain permission before enrollment in the course for which he or she seeks credit toward the law degree. A grade of P or better (on the basis of the usual graduate school grading criteria of H, P, L, and F) will be transferred to the student's law record on a credit basis. The grade will not be averaged into the cumulative grade point average of the student.

This policy is not designed to affect in any way the continuing opportunities available to law students to take or audit courses in other divisions of the University on a non-credit (toward the law degree) basis.

Interinstitutional Program

Students wishing to take courses, which are not regularly offered at UNC-Chapel Hill, at either Duke Law School or North Carolina Central Law School, should individually determine their availability and then see the School of Law's Registrar for registration procedures. There is no additional tuition charge for courses taken through the interinstitutional program during the academic year; summer school, however, is not covered by the program. Students may not fulfill their seminar requirement by taking a seminar at these institutions.

Summer Session at the School of Law

Several courses running for seven and one-half weeks and several courses running for five and one-half weeks are expected to be offered. Students who attend for seven and one-half weeks may qualify for one-half of a semester of residency. Courses are taught both by resident and visiting faculty.

All courses offered at the summer session are open to: (1) students in this law school; (2) duly accepted applicants for admission to advanced standing; and (3) advanced students in good standing in any law school which is a member of the Association of American Law Schools or approved by the American Bar Association Section of Legal Education and Admission to the Bar, even though such students do not expect to become candidates for this law school's degree of Juris Doctor. A student in this third category may be accepted for the summer session, without submitting a transcript, upon certification from the dean of the law school last attended that he or she is eligible to return to that school. No student will be permitted to enroll in more than two courses per term.

Announcement of courses to be offered in the summer of 1993, precise dates, and tuition and fees will be available on request during the spring of 1993.

SUMMER SESSION 1992

Courses Offered

May 18–July 6

APPELLATE ADVOCACY SEMINAR

David Sentelle, United States Circuit Court of Appeals (District of Columbia)

CURRENT CONTROVERSIES IN CIVIL AND CONSTITUTIONAL RIGHTS

Linda S. Greene

University of Wisconsin

DEBTOR-CREDITOR RELATIONS

Margaret Howard

Vanderbilt University

ENVIRONMENTAL LAW

Ronald Rosenberg

College of William and Mary

EVIDENCE

Walker J. Blakey

Joint Degree Programs

JD/MRP

The combined degrees of JD and Master of Regional Planning (MRP) may be earned in four years, including one summer session, by enrollment in the joint program of the School of Law and the Department of City and Regional Planning. Admission to each school must be gained independently. The complete prescribed first-year curriculum of the law school must be taken, as a unit, and certain planning courses are required. The remainder of the curriculum is completely elective, subject to the approval of a joint faculty committee of both schools. A candidate must complete successfully the combination of 74 semester hours in the law school and 36 semester hours in the planning department.

Material describing the program in greater detail is available on request from the Admissions Office or from the Chairman, Department of City and Regional Planning, New East Building, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

Dean Judith Wegner is law school adviser for this program.

JD/MBA

The combined degrees of JD and Master of Business Administration may be earned in four years by enrollment in the joint program of the School of Law and the School of Business Administration. Admission to each school must be gained independently. In the first year of the program, candidates must take the complete prescribed first-year curriculum in either law or in business and in the second year, that of the other school. In the third and fourth years, elective law courses and prescribed business courses make up the remainder of the curriculum. A candidate must complete successfully the combination of 74 semester hours in the law school and 49 semester hours in the business school.

Material describing the program in greater detail is available on request from the Admissions Office or from the Executive Director, MBA Program, Graduate School of Business Administration, Carroll Hall, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

Professor Thomas Hazen is faculty adviser for this program.

JD/MPA

The degrees of JD and MPA (Master of Public Administration) may be earned in four years of classwork and an additional three to nine months of internship by enrollment in the dual degree program of the School of Law and the UNC-Chapel Hill Master of Public Administration Program. Admission to the School of Law and the MPA Program must be gained independently.

A total of 86 semester hours is required for the JD. Three hours of the 86 hours may be courses from the MPA curriculum. A total of 45 semester hours is required for the MPA. Nine of the hours may be from the JD curriculum. Thus, both degrees can be completed in a total of 119 semester hours, with prior approval of a dual degree plan of study.

JD/MAPPS (Duke)

The combined degrees of JD and Master of Arts in Public Policy Sciences (MAPPS) may be earned in four years, by enrollment in the joint program of the School of Law and the Institute of Policy Sciences at nearby Duke University. Admission to each school must be gained independently.

The first academic year is spent exclusively in the law school, the second year is spent exclusively in the Institute of Policy Sciences, and the third and fourth years mainly in the law school, but with one public policy sciences course each semester. A candidate must complete successfully a combination of 74 semester hours in the law school and 30 semester hours in the Institute of Policy Sciences.

Material describing the program in greater detail is available on request from the Admissions Office or from the Director of Graduate Studies, Institute of Policy Sciences and Public Affairs, 4875 Duke Station, Durham, NC 27706.

Program in Law, Medicine, and Health Care (including the JD/MPH combined degrees)

The UNC-Chapel Hill School of Law offers one of the most extensive curricula in the nation for law students interested in medicine, health care, and related fields. In addition, second and third year law students, with the approval of the Associate Dean and the Program Director, may enroll in certain courses at the UNC-Chapel Hill School of Public Health and the UNC-Chapel Hill School of Medicine. (A maximum of 3 credits from these courses can be counted toward the law school degree.)

Students interested in pursuing a specialized career in health law or in a more intensive and supervised program of course work and research related to medicine and health care may apply for the combined degrees of JD and Master of Public Health. Application to this program, which enables the completion of both degrees in four years, may be made before entering or after completing any year of law school. Admission to both schools must be gained independently. Candidates must complete 86 semester hours in the law school and 30 hours in the School of Public Health.

Ordinarily, joint degree students begin with the school's prescribed first-year curriculum. Following their first or second year, the students spend a year in residence at the School of Public Health and at least one summer in a selected field training experience. They also initiate a research project and may qualify for credit by additional writing or field training experiences under the supervision of Program faculty and affiliates.

Further information may be obtained from Associate Dean Burnele Powell, School of Law, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

Scholastic Standards and Regulations

Grading Scale

Effective fall of 1988, grades are assigned on the following basis:

Letter Grade	Grade Point Value
A	4.0
A –	3.7
B +	3.3
B	3.0
B –	2.7
C +	2.3
C	2.0
C –	1.7
D +	1.3
D	1.0
D –	.7
F	0

In rare instances a grade of A+ (4.3) may be awarded in recognition of exceptionally high performance.

An annual cumulative grade point average of 1.7 is required to be eligible to continue in school, and a cumulative grade point average of 1.7 is required for graduation.

The required annual average for each year shall be computed and exclusions determined only at the end of the spring semester in each year. The average required for graduation will be computed whenever the student will have completed the required amount of work.

Dean's List

All students who attain an average of 3.0 or better in any semester (but not summer terms) will be named to the Dean's List for that semester.

Course Load Per Semester

The normal amount of work for upperclass students is twelve to fourteen class hours per week; the maximum is sixteen, unless the Associate Dean grants special permission to take more. Students who carry burdensome responsibilities will be required to register for less than the normal course load in the School of Law.

A regular semester is defined to include ten (10) or more hours of credit. No student passing fewer than ten hours will be considered as fully complying with the requirements of residence for University degrees or for the state bar examinations. Special regulations are applicable to the summer session. Residence requirements may not be waived.

Dropping/Adding Courses

Students who fail to attend at least one of the first two class meetings of an upperclass course that has a waiting list, or the first meeting of an upperclass course or seminar that meets only once a week and has a waiting list will be automatically dropped from the course unless excused for illness or other good cause by the Associate Dean. Such excuse normally must be obtained in advance.

Students will not be permitted to drop or add any course after the established deadlines except under unusual circumstances, such as extended absence because of illness of the student or in the student's family. Such changes must be approved by the Associate Dean.

Auditing

Students may audit classes in which space is available, provided permission is obtained from the instructor and the Associate Dean. Permission should not be sought unless the student intends to attend class regularly for the entire semester. Persons not enrolled in the law school or another school or department of the University ordinarily may not audit law classes. No record is kept of courses audited, and no fees are charged to full-time students.

Examinations

In first-year courses practice examinations are held in October for advisory purposes only and are not recorded or counted in student averages. Final examinations are held at the end of each semester in all courses except seminars.

No student is required to repeat any course in which he or she made a course grade of F. In the event the student elects to repeat a course, he or she may do so the next time the course is regularly given following the failure, and both grades are recorded and averaged as of the respective years in which they are awarded.

A student may reschedule one examination in, but only in, the following situations:

1. When the student has two exams on the same day; or
2. When the student has one exam on the afternoon of one day and one on the morning of the next.

Any exam rescheduled shall be taken on the morning of the day following the last day of regularly scheduled exams. A request to reschedule an exam under these rules shall be submitted not later than the close of the fifth working day prior to the date on which the exam is scheduled.

Attendance and Exclusion

Any student who fails to maintain the required scholastic average for any academic year automatically is excluded from the School of Law at the close of the spring semester in the year in which such failure occurs.

Accreditation standards provide that regular and punctual class attendance is necessary to satisfy residence and class hours requirements.

The faculty may dismiss from the school at any time a student who, in its judgment, is not making sufficient progress to warrant his or her continuing in the school. Any individual instructor may, with the concurrence of the Dean, dismiss a student from a course at any time for unsatisfactory work or other cause.

It is the policy of the school that all students should regularly attend class. The method of enforcing this policy in any particular course is left to the instructor of that course. Enforcement methods may include lowering the grade of any student too frequently absent, or, with the concurrence of the Dean, dismissing such a student from the course. Further, the faculty may dismiss from the school at any time a student who is too frequently absent from classes.

Withdrawals

If a student wishes to withdraw at any time other than at the end of a term, a formal withdrawal, which is prerequisite to honorable dismissal or reentrance to this institution, must be approved by the Dean. Such a withdrawal will be approved only after full investigation of the circumstances and after the lapse of twenty-four hours from the

time the first application is filed with the Dean. The withdrawal form, after being approved by the Dean, must be filed promptly with the School of Law Registrar.

A student withdrawing within the first nine weeks of a term may procure a pro rata refund of tuition paid.

Students who withdraw from the school voluntarily after successfully completing a minimum of one full-time semester may return within a five-year period. See the School of Law Registrar for more information.

Readmission

Each student admitted to the School of Law is presumed to be able, through diligent effort, to complete law study without academic failure. No student, therefore, who is excluded will be readmitted unless he or she persuades the faculty's readmission committee that despite the failure there is substantial likelihood that he or she will successfully complete law study if readmitted. The committee gives due consideration to all factors positively indicating such likelihood.

Students who withdraw from the law school voluntarily may be readmitted within a five-year period.

THE HONOR SYSTEM

For almost a century, students at The University of North Carolina at Chapel Hill have accepted responsibility for their own conduct and discipline in academic and nonacademic affairs. The student body defined this responsibility in two codes, the Honor Code and the Campus Code. These codes and provisions for their enforcement have been incorporated into the "Instrument of Student Judicial Governance" which has been formally adopted by the student body, approved by the Faculty Council and approved by the Chancellor. Acceptance by a student of enrollment in the University presupposes a commitment to these codes and to the principles of self-regulation on which their continued viability rests.

The School of Law Attorney General, who is appointed by the Student Bar Association, is responsible for the enforcement of the Honor Code at the law school.

The Honor Code

It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and to support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student, or academic personnel acting in an official capacity.

Academic work is a joint enterprise involving faculty and students. Both have a fundamental investment in the enterprise and both must share responsibility for ensuring its integrity.

Responsibility of Students

1) To conduct all academic work within the letter and spirit of the Honor Code which prohibits the giving or receiving of unauthorized aid in all academic processes.
2) To consult with faculty and other sources to clarify the meaning of plagiarism; to learn the recognized techniques of proper attribution of sources used in the preparation of written work; and to identify allowable resource materials or aids to be used during examination or in completion of any graded work.
3) To sign a pledge on all graded academic work certifying that no unauthorized assistance has been received or given in the completion of the work.
4) To comply with faculty regulations designed to reduce the possibility of cheating—such as removing unauthorized materials or aids from the room and protecting one's own examination paper from view of others.
5) To maintain the confidentiality of examinations by divulging no information concerning an examination, directly or indirectly, to another student yet to write that same examination.
6) To report any instance in which reasonable grounds exist to believe that a student has given or received unauthorized aid in graded work. Such report should be made to the Office of the Student Attorney General or the Office of Student Affairs.
7) To cooperate with the Office of the Student Attorney General and the defense counsel in the investigation and trial of any incidence of alleged violation, including the giving of testimony when called upon. Nothing herein shall be construed to contravene a student's rights enumerated in Section V.A.2.b. of the Instrument.

The Campus Code

It shall be the further responsibility of every student to abide by the Campus Code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University community.

All nonacademic conduct that infringes upon the rights or welfare of others at the University is thus embodied in the Campus Code. Violations of the Campus Code are handled in the same manner as violations of the Honor Code.

Procedure for Reporting

Violations of either the Honor Code or Campus Code may be reported directly by the observer to the Student Attorney General or the Office of the Dean of Student Affairs. If practicable, the observer can request that the accused student turn himself in for the alleged violation within 24 hours before the matter is directly reported. Faculty members who have cause to turn in a student proceed in the same manner.

Student Judicial System

Complete information on the Student Judicial System including the Code of Student Conduct, procedures for hearings, appeals, sanctions, and guaranteed student rights may be obtained in the "Instrument of Student Judicial Governance" which is provided to each entering student and is always available in the Student Attorney General's office and the Division of Student Affairs.

REQUIREMENTS FOR THE DEGREE OF JURIS DOCTOR

Juris Doctor

The degree of *Juris Doctor (JD)* is conferred upon a student who has studied law for a period of at least three academic years (six semesters) and has satisfactorily completed enough subjects, required and elective, to make up an aggregate of eighty-six semester hours. Five regular semesters and two summer sessions of seven and one-half weeks in which at least five credit hours are taken in each session, are regarded as complying with the residence requirements. Residence requirements may not be waived, and students should plan their programs so as to avoid deficiencies.

Students are required to have two substantial research and writing experiences after the first year in order to graduate. One such experience must be a seminar. The other must be completed satisfactorily in the second year as described above under Program of Instruction.

Memoranda done during summer employment or based on research done during summer employment do not qualify for academic credit.

All degree candidates must complete the course in Professional Responsibility (Law 266 or 266M) in the second year.

The School of Law reserves the right to change rules and requirements governing instruction and graduation and to change any other regulations affecting the student body. Any changes will become effective and apply to prospective students and also, when so provided, to students already matriculated.

Juris Doctor with Honors

The degree of *Juris Doctor with Honors* is awarded to those students who, in the judgment of the faculty, merit honors and who comply with the following requirements:

1. Completion of requirements for the JD degree.
2. Attainment of a weighted average grade upon all law courses taken of 3.0 or more or the top third, whichever yields the smaller number.
3. a) Preparation of two publishable *Law Review* notes, or two publishable *Journal of International Law* notes; or

b) Preparation, individually or with others, of at least two writing projects for programs administered through the Holderness Moot Court Bench which satisfy guidelines established by the Dean, provided that the Chief Justice of and the Faculty Adviser to the Bench shall deem the student's contribution to the writings to be of high quality; or

c) Preparation of written material which satisfies guidelines established by the Dean and is deemed equivalent in quality and effort to two publishable notes either by the Editor in Chief and Faculty Adviser of the *Law Review* or by the Editor in Chief and Faculty Adviser of the *International Law Journal*. Such material must not be prepared for coursework, independent research, employment, or any similar purpose. Papers prepared for national or state-wide law student writing competitions, however, can be used to satisfy this requirement. Students seeking to satisfy this requirement by submitting material on which they have collaborated with some other person must demonstrate that their contributions to the material satisfy the equivalency test established above.

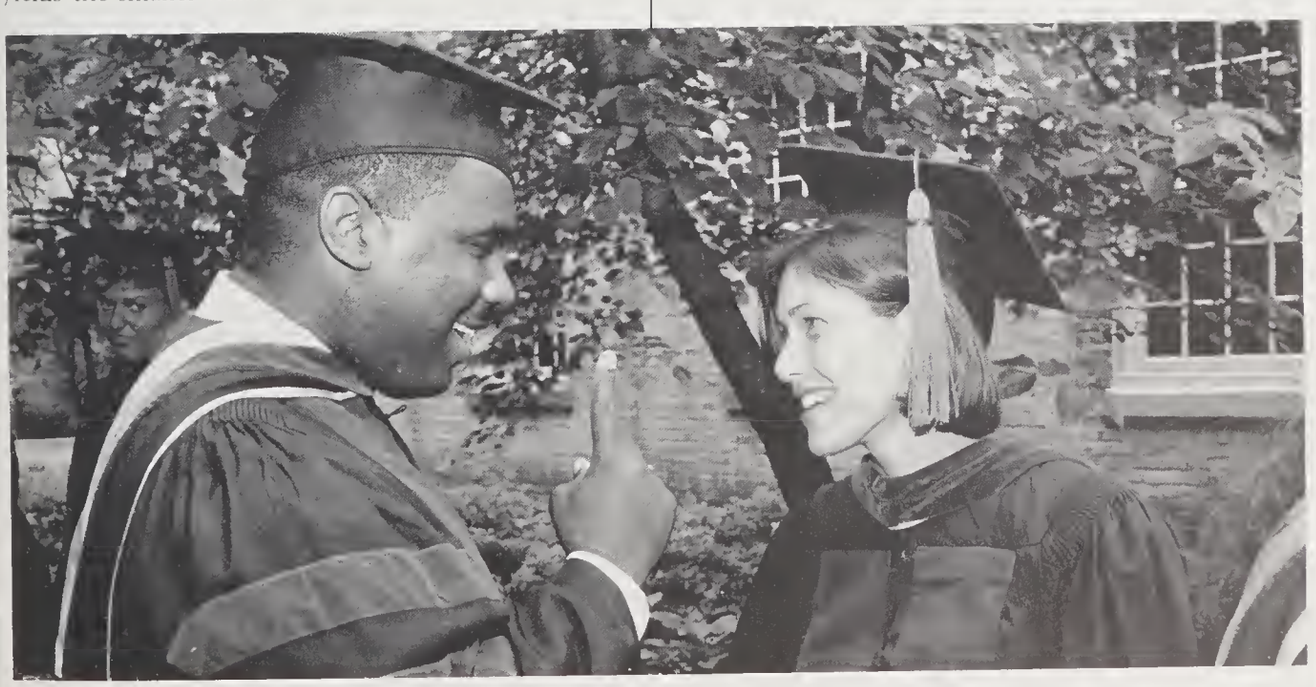
More detailed information describing the fulfillment of the Honors writing requirement by independent project can be obtained from the law school Office of Records and Registration.

The degree of *Juris Doctor with High Honors* will be awarded to those students who have completed all requirements for the JD with Honors and who, in the judgment of the faculty, have demonstrated superior legal scholarship in their work as a whole. In limited instances, the degree of *Juris Doctor with Highest Honors* may be awarded in recognition of exceptionally high performance.

Honors and Awards

Order of the Coif

In 68 of the leading schools of law in this country conforming to high scholastic standards, chapters of the honorary society of the Order of the Coif have been installed. Chapters may elect to membership any graduating senior (1) who has completed at least 75 percent of his or her law



Graduation day produces many smiles among School of Law graduates who are ready for the challenges ahead.

studies in graded courses and (2) whose grade record ranks in the top 10 percent of all the graduating seniors. The members are selected upon graduation by vote of the North Carolina Chapter.

Order of the Barristers

A national association of law school moot court organizations established to promote excellence in brief writing and oral advocacy. The Order is composed of more than 50 schools, each of which selects up to ten persons who have exhibited outstanding achievement in or service to their school's moot court program.

The James E. and Carolyn B. Davis Society

Established by friends and family of the 1973 law school alumnus and his wife to honor up to eight third-year students judged most outstanding in areas of academic achievement, leadership, extracurricular involvement, and character.

The North Carolina Academy of Trial Lawyers

Encourages interest in trial advocacy and improvement in trial practice, and presents a book prize to the student in each section of the course in Trial Advocacy who demonstrates greatest improvement in performance in the course.

American Jurisprudence Award.

The Lawyers Cooperative Publishing Company and Bancroft-Whitney Company award certificates and relevant titles of American Jurisprudence 2d to students earning the highest grades in certain courses.

The Block Improvement Award

Presented each year to the third-year student who, upon sincere devotion to law studies during all of his or her law school career, has made the most constant improvement in academic work from the date of enrollment to the end of the fifth semester. The $300 Award was established by the late Norman Block of the Greensboro Bar in memory of his father, Max Edward Block, and is being continued by his family.

The Nathan Burkan Memorial Competition

A writing competition which offers a first prize of $500 and a second prize of $250 to the second- or third-year students who write the best papers on copyright law each year. Winning papers also are entered in the national competition in which the best papers are considered for five national awards ranging from $500 to $3,000.

The Millard S. Breckenridge Award

Awarded each year to the third-year student selected by the law faculty, upon recommendation of the faculty members teaching the appropriate subjects, for excellence in the study of the law of taxation. The award consists of the annual income (approximately $200) from a fund given by Madelaine R. Brown.

The Judge Heriot Clarkson Award

Presented annually to students making the highest grades in the courses in Professional Responsibility. The award consists of law books or cash from a fund provided by the will of the late Associate Justice Heriot Clarkson of the North Carolina Supreme Court.

The Chief Justice Walter Clark Award

Presented by his son, John W. Clark, this award is made to the five seniors who, at the end of their fifth semester, have the highest scholastic averages in the class. The award consists of the two-volume Papers of Walter Clark, edited by Aubrey L. Brooks and Hugh T. Lefler.

The Albert Coates Award

Awarded from a fund initiated by a gift from the late Senator Sam J. Ervin, Jr., to a student who has earned distinction in the law school.

The Investors Title Insurance Company

In order to encourage and recognize excellence in the study of real property law, Investors Title Insurance Company annually provides a cash award of $500 and a plaque of recognition to a rising third-year student who has demonstrated excellence in the study of property law. The faculty will select, as the recipient of the award, the rising senior having the highest average grade in property courses. To be eligible, a student must take Property I and II and Trusts and Estates I and II.

The William T. Joyner Awards Fund

This fund was established by friends and family of the late Colonel Joyner to recognize excellence in writing for student publications. Each year two awards are presented, one to the student whose writing for the *North Carolina Law Review* and another to the student whose writing for the *North Carolina Journal of International Law and Commercial Regulation* are judged most outstanding.

The James William Morrow III Award

Friends and family of Jim Morrow, Class of 1987, established the award in 1988 an annual memorial to recognize the student at the UNC-Chapel Hill School of Law who has demonstrated outstanding service and dedication to the Holderness Moot Court. The recipient of the Morrow Award is determined by vote of the members of the Moot Court Bench.

N. Ferebee Taylor Award for Excellence in Corporate Law

Each year the N. Ferebee Taylor Award for Excellence in Corporate Law is presented to a member of the graduating class of UNC-Chapel Hill School of Law who has done an outstanding job in three or more courses in the area of corporate law. The $100 award was established by the law faculty in 1991 to honor Professor Emeritus Taylor.

The United States Law Week Award

This prize of approximately $100 value, is given to the graduating student in law who, in the judgment of the faculty, has made the most satisfactory scholastic progress in his or her final school year. The award consists of a year's complimentary subscription to *Law Week*, which every week reports important new court decisions and federal agency rulings, and all Supreme Court opinions.

The West Publishing Company

West Publishing annually presents book awards for outstanding scholastic achievement to students enrolled in each of the three classes.

BAR EXAMINATIONS AND REQUIREMENTS

In North Carolina

The Rules of the North Carolina Board of Law Examiners provide as follows with respect to the subjects tested on the Bar Examination:

> The examination may deal with the following subjects: Business Associations (including agency, corporations, and partnerships), Civil Procedure, Constitutional Law, Contracts, Criminal Law and Procedure, Evidence, Family Law, Legal Ethics, Real Property, Security Transactions including The Uniform Commercial Code, Taxation, Torts, Trusts, Wills, Decedents' Estates and Equity.

North Carolina rules do not require that bar applicants have taken in law school all the subjects tested on the exam. Some students choose not to take some listed subjects because they prefer to take other courses and opt to prepare those subjects for the bar exam by more intensive bar review study. Ultimately, it is an individual decision for each student intending to take the North Carolina Bar Exam whether to take all bar-related courses.

In Other States

Bar examinations in other states may cover additional or different subjects. Some state bars, e.g., South Carolina and Indiana, also require that students have actually taken particular courses for a set number of credit hours in order to sit for the bar exam. Students should contact the board of bar examiners in the state in which they plan to sit for the bar in order to determine applicable requirements. Reference sources containing the addresses of state bar examiners are available from the School of Law Registrar's Office.

STUDENT ORGANIZATIONS AND PUBLICATIONS

American Indian Law Students Association

The American Indian Law Students Association (AILSA) is a national organization whose objectives are to promote unity and cooperation among Indian law students and to provide a base from which work can be done for the advancement of Indian people.

Amnesty International Legal Support Network

The Amnesty International Legal Support Network Group at the Law School participates in AI's core human rights work by writing letters on behalf of colleagues imprisoned as prisoners of conscience, detained without charge or trial, or faced with torture or execution.

Black Law Students Association

The Black Law Students Association is a forum for the sharing and solving of problems unique to African American students in the law school community.

Christian Legal Society

The Christian Legal Society is a professional organization of Christian lawyers, judges, and law students who share a common interest in integrating their faith and the practice of law.

Environmental Law Project

The Environmental Law Project is an organization of law students who share an interest in the legal and political aspects of national, state, and local environmental issues.

Federalist Society for Law and Public Policy Studies

The Federalist Society for Law and Public Policy Studies is a national organization of conservative and libertarian law students.

Hispanic Law Students Association

The HLSA is a national organization that strives to provide a supportive environment for Hispanic law students and to promote broader cultural understanding of issues affecting Hispanic people.

Holderness Moot Court

The Holderness Moot Court Program is designed to provide law students with the opportunity to develop practical skills in legal research and writing, client counseling, appellate oral advocacy, and negotiation.

Mere Dictum

Mere Dictum is a student-run newspaper published monthly to serve the UNC-Chapel Hill Law School community. The paper focuses on school events and activities, provides a forum for thought and opinion, and recognizes achievements of students, faculty, and alumni. The staff welcomes any student, faculty, or staff member who wishes to contribute in areas ranging from writing and photography to advertising and layout. Staff membership is available to any interested student.

National Lawyers Guild

The National Lawyers Guild (NLG) is a diverse, multiracial organization of lawyers, legal workers, law students, and jailhouse lawyers committed to the achievement of political, economic, and social justice.

North Carolina Journal of International Law and Commercial Regulation

The *North Carolina Journal of International Law and Commercial Regulation*, one of the nation's leading publications on international commerce, provides practical information about the international and commercial marketplace. The *Journal* features articles, comments, case notes, recent developments, and book reviews by students, professors and practitioners.

North Carolina Law Review

The *North Carolina Law Review*, a prominent state and national scholarly journal established in 1922, analyzes current legal problems and significant new developments in the law. Six times each year, the Review publishes not only the scholarship of lawyers, judges, and professors from across the country, but also the contributions of student staff members.

North Carolina Lawyer's Research Service

The North Carolina Lawyer's Research Service (NCLRS) is a wholly student-run, self-supporting, not-for-profit corporation providing legal research service at a nominal fee to lawyers licensed to practice in the state of North Carolina.

Parents Active in Law School

Parents Active in Law School (PALS) is an organization of law students, who have or plan to have children, that provides mutual support and information.

Phi Alpha Delta

Phi Alpha Delta (PAD), the world's largest law fraternity, is a professional service organization serving law students, law schools and the legal profession.

Prisoners' Rights Project

Prisoners' Rights Project volunteers respond to inmate requests for legal and administrative assistance where possible.

Prospective Student Association

The Prospective Student Association (PSA) is a student-run group designed to introduce prospective students to the law school with a building tour, class visit, and meeting with current students.

Second Careers in Law

Second Careers in Law (SCILs) is a support group for students who have had other life or work experiences between undergraduate and law school. Membership consists of students whose lives after college have given them a slightly different perspective on the law school experience.

In the past years, members have included former teachers, stockbrokers, homemakers, engineers, accountants, nurses, ministers, military career officers, a chef, and a surgeon.

Student Bar Association

The Student Bar Association promotes understanding among the faculty, students and alumni; furthers scholastic attainment; and furthers professional and social interest among all students enrolled in the law school.

UNC Student Bar Foundation, Inc.

The UNC Student Bar Foundation (SBF) is a nonprofit corporation which lends funds to law students on a low interest basis.

Women in Law

Women in Law is an association of law students who represent and promote women's interests in the law school, the legal profession, and the general community.

SERVICES AND POLICIES

Athletic Facilities

Upon registration all students are automatically entitled at no additional charge to the use of the University's athletic equipment and facilities, most of which are adjacent to Van Hecke-Wettach Hall, and attendance at athletic events, subject to seating limitations. Law school teams compete regularly in intramural sports.

Career Development and Services

The School of Law provides a comprehensive career development program. Please refer to the *Information and Application 1992–93 Booklet* for more detailed information.

Students and faculty often take a break between classes in the courtyard outside Van Hecke-Wettach Hall.

Computer Services

A computer laboratory with IBM and Apple Macintosh PCs is located on the third floor of the school's library. The lab, open for public use, is staffed by students and cosponsored by the Microcomputing Support Center and School of Law Library.

Counseling Services

The student psychological services staff of Student Health Services provides counseling services, including crisis intervention, short-term individual therapy, couples counseling, and stress management. Records are kept separate from regular medical records and strict confidentiality is maintained.

Handicapped Student Services

The University and the School of Law work together to accommodate the needs of handicapped students. For information, contact the Handicapped Student Coordinator, 05 Steele Building, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599 or call (919) 966-4041.

The Law Library

The Law Library is located in the west wing of Van Hecke-Wettach Hall. The collection of approximately 350,000 volumes is housed on five floors and includes a basic collection of Anglo-American legal materials for the study and research of law. Court reports for American and English appellate courts, current codes and session laws for all states, and other primary legal materials are included in the collection. The legal periodical collection includes law reviews and many other law-related periodicals. The library maintains a subscription for *Legaltrac*, a CD-ROM indexing system to legal periodicals. Treatises, digests, encyclopedias, citators, looseleaf services, and other materials of interest to the legal profession are available. The library has a collection of records and briefs for the North Carolina courts, the Fourth Circuit Court of Appeals, and the United States Supreme Court.

Both *Westlaw* and *Lexis*, two computer-assisted legal research systems, are available in library, office, and home locations to students and faculty. Classes to instruct first-year students on the use of these two systems are part of the required Research and Writing course. Public Services personnel train other users at scheduled times. The library also provides other types of online services, including *Dialog*.

Parking

Law students may be assigned parking permits by applying through the Student Bar Association. The order of priority for parking permits is (1) third-year students, (2) second-year students, and (3) first-year students. First-year students cannot apply for a permit until the first day of orientation.

Office of Records and Registration

The school's Office of Records and Registration is administered by a Registrar, who is responsible for all aspects of student registration, maintenance of academic records of enrolled students and alumni. The office also oversees access to student records in light of applicable law (FERPA) and determines candidates for graduation, honors, and awards.

The Registrar's office is the primary provider of technical information about students and academic scheduling for other officers in the School of Law. In addition, the Registrar is editor of the School of Law Record and the UNC Law Newsletter.

The office is located in 109 Van Hecke-Wettach Hall, telephone (919) 962-1249.

Smoking Policy

Smoking is not permitted in the lobby, classrooms, restrooms, library areas, corridors, shared offices, or public areas in Van Hecke-Wettach Hall, the Clinic Annex, or the Snack Bar Annex. Smoking is allowed, with adequate ventilation as approved by the Dean, in the study module of the Snack Bar Annex, Van Hecke-Wettach Hall front veranda, and faculty offices (occupant permitting).

Student Affairs

Each year the curriculum is supplemented by a range of programs designed to help students address the special concerns and needs of law students and lawyers. During the 1991–1992 academic year, the school sponsored a variety of programs on topics such as childcare options at the University, learning in a multicultural environment, exam and study techniques, sexual harassment, the application process for the bar examination, and methods of balancing career and family.

The student affairs programs also include a mentoring program which matches enrolled students with alumni. Initiatives in the area of stress managment provide students with an opportunity to participate in workshops about stress and relaxation techniques. Ideas for other programs are encouraged and supported by the school's administration, whose philosophy is to help students with all parts of their lives.

Student Health Service

Law students who have paid the student health fee are eligible for health care at the James A. Taylor Student Health Service. Services provided include clinical medicine, sports medicine, mental health, women's health, health education, allergy clinic, pharmacy, short term care and an inpatient hospital facility. Each year, the Student Health Service and the Student Development and Counseling Center sponsor group workshops and support groups.

Protocol for Victims of Sexual Assault

A law student who has experienced a sexual assault should contact the Assistant Dean for Student Affairs or the Associate Dean for Academic Affairs to receive advice concerning other assistance that may be available on campus. The Associate Dean for Academic Affairs will determine, after consultation with the student, whether some form of academic relief may be needed (e.g., postponement of an exam, dropping of a course, or withdrawal).

THE UNIVERSITY OF NORTH CAROLINA SIXTEEN CONSTITUENT INSTITUTIONS

C. D. Spangler, Jr.,
B.S., M.B.A., D.H.L., LL.D., President

William F. Little,
B.A., M.A., Ph.D., Interim Vice-President—Academic Affairs

Roy Carroll,
B.A., M.A., Ph.D., Vice-President—Planning

Nathan F. Simms, Jr.,
B.S., M.S., Ph.D., Vice-President—Student Services and Special Programs

L. Felix Joyner,
A.B., Vice-President—Finance

David G. Martin, Jr.,
B.A., LL.B., Secretary of the University

Jasper D. Memory,
B.S., Ph.D., Vice-President—Research and Public Service

Wyndham Robertson,
A.B., Vice-President—Communications

Jay M. Robinson,
B.S., M.A., Ed.D., Vice-President—Public Affairs

Richard H. Robinson, Jr.,
A.B., LL.B., Assistant to the President

HISTORY OF THE UNIVERSITY OF NORTH CAROLINA

In North Carolina, all the public educational institutions that grant baccalaureate degrees are part of The University of North Carolina. The University of North Carolina at Chapel Hill is one of sixteen constituent institutions of the multicampus state university.

The University of North Carolina, chartered by the N.C. General Assembly in 1789, was the first public university in the United States to open its doors and the only one to graduate students in the eighteenth century. The first class was admitted in Chapel Hill in 1795. For the next 136 years, the only campus of The University of North Carolina was at Chapel Hill.

In 1877, the N.C. General Assembly began sponsoring additional institutions of higher education, diverse in origin and purpose. Five were historically black institutions, and another was founded to educate American Indians. Several were created to prepare teachers for the public schools. Others had a technological emphasis. One is a training school for performing artists.

In 1931, the N.C. General Assembly redefined The University of North Carolina to include three state-supported institutions: the campus at Chapel Hill (now The University of North Carolina at Chapel Hill), North Carolina State College (now North Carolina State University at Raleigh), and Woman's College (now The University of North Carolina at Greensboro). The new multicampus University operated with one board of trustees and one president. By 1969, three additional campuses had joined the University through legislative action: The University of North Carolina at Charlotte, The University of North Carolina at Asheville, and The University of North Carolina at Wilmington.

In 1971, the General Assembly passed legislation bringing into The University of North Carolina the state's ten remaining public senior institutions, each of which had until then been legally separate: Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, the North Carolina School of the Arts, Pembroke State University, Western Carolina University, and Winston-Salem State University. This action created the current sixteen-campus University. (In 1985, the North Carolina School of Science and Mathematics, a residential high school for gifted students, was declared an affiliated school of the University.)

The UNC Board of Governors is the policy-making body legally charged with "the general determination, control, supervision, management, and governance of all affairs of the constituent institutions." It elects the president, who administers the University. The thirty-two voting members of the Board of Governors are elected by the General Assembly for four-year terms. Former board chairmen and board members who are former governors of North Carolina may continue to serve for limited periods as nonvoting members emeriti. The president of the UNC Association of Student Governments, or that student's designee, is also a nonvoting member.

Each of the sixteen constituent institutions is headed by a chancellor, who is chosen by the Board of Governors on the president's nomination and is responsible to the president. Each institution has a board of trustees, consisting of eight members elected by the Board of Governors, four appointed by the governor, and the president of the student body, who serves ex officio. (The NC School of the Arts has two additional ex officio members.) Each board of trustees holds extensive powers delegation from the Board of Governors.

APPENDIX

RESIDENCE STATUS FOR TUITION PURPOSES[1]

The following sections summarize important aspects of the residency law. A complete explanation of the Statute and the procedures under the Statute is contained in *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes.* This *Manual* and other information concerning the application of this law are available for inspection in the Admissions Offices of the University. Copies of the *Manual* are also on reserve at the Robert B. House Undergraduate Library and in the Reserve Reading Room of the Health Sciences Library. All students are responsible for knowledge of the contents of the Statute and the *Manual.*

Every applicant for admission is required to make a statement as to his or her length of residence in North Carolina. A person who qualifies as a resident for tuition purposes under North Carolina law pays a lower rate of tuition than a nonresident. To qualify for in-state tuition, a legal resident must have been domiciled in North Carolina for at least twelve months immediately prior to the beginning of the term for which classification as a resident for tuition purposes is sought. The student must also establish that his or her presence in the State during such twelve-month period was for purposes of maintaining a bona fide domicile rather than for purposes of maintaining a mere temporary residence incident to enrollment in an institution of higher education. "Domicile" means one's permanent home of indefinite duration, as distinguished from a temporary place of abode; it is synonymous with "legal residence" and is established by being physically present in a place with the concurrent intent to make that place a domicile. To determine an individual's intent, the University evaluates his or her objectively verifiable conduct as an indicator of his or her state of mind.

Procedural Information

General

A student admitted to initial enrollment in an institution (or permitted to re-enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) is classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual matriculation. In the absence of a current and final determination of the student's residence prior to matriculation, the student is classified a nonresident for tuition purposes. The institution will thereafter reach a final determination of the student's residence status. Unless a person supplies enough information to allow the admissions officer to classify him or her as a resident for tuition purposes, the person will be classified a nonresident for tuition purposes. A residence classification once assigned (and confirmed pursuant to any appellate process invoked) may be changed thereafter (with a corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic calendar.

Transfer Students

When a student transfers from one North Carolina public institution of higher education to another, he or she is required to be treated as a new student by the institution to which he or she is transferring and must be assigned an initial residence classification for tuition purposes. The residence classification of a student by one institution is not binding on another institution. The North Carolina institutions of higher education will assist each other by supplying residency information and classification records concerning a student to another classifying institution upon request.

The transfer into or admission to a different component of the same institution (e.g., from an undergraduate to a graduate or professional program) is not construed as a transfer from one institution to another and thus does not by itself require a reclassification inquiry unless (1) the affected student requests a reclassification inquiry or (2) the transfer or enrollment occurs following the lapse of more than one quarter, semester, or term during which the individual was not enrolled as a student.

Responsibility of Students and Prospective Students

Any student or prospective student in doubt concerning his or her residence status bears the responsibility for securing a ruling by completing an application for resident status and filing it with the admissions officer. The student who, due to subsequent events, becomes eligible for a change in classification, whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the Office of Admissions of these circumstances in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

[1]The information in this section comes from three sources: (i) North Carolina General Statutes, §116–143.1, (ii) *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes,* Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes.

Application Process

A person may obtain an application for resident status from his or her admissions office. Applicants for admission who claim eligibility for the in-state tuition rate customarily complete a two-page residency application as a part of the admissions application packet. Some applicants for admission will thereafter be required to complete a further, four-page, residency application. Enrolled students seeking a change from nonresident to resident status are required to complete a four-page residency application. *All* applications for resident status must be filed with the proper admissions office before the end of the term for which resident status for tuition purposes is sought. The last day of the final examination period is considered the last day of the term.

After filing a resident status application, a person may receive a letter from his or her admissions office requesting more information in connection with that application. When a student receives such a request before the end of the term for which classification is sought, he or she must respond to that request no later than three weeks after the end of the term. If the student receives the request for supplemental information after the end of the term in question, he or she must supply the requested information within three weeks after receipt of the request. Failure to supply the requested information within the specified time limit will result in a continuation of the student's nonresident classification unless good cause is shown for such failure.

The admissions office may require an applicant for admission to file a residency application, or respond to a request for more information, more quickly when residence status is a factor in the admissions decision.

The pamphlet "Information About Resident Status for Tuition Purposes" contains more details about the residency application process and is available at all admissions offices.

Fraudulent Applications

If a student is classified a resident for tuition purposes after submitting falsified residentiary information or after knowingly withholding residentiary information, the student's application for in-state tuition status is fraudulent. The institution may re-

examine any application suspected of being fraudulent and, if warranted, will change the student's residence status retroactively to the beginning of the term with respect to which the student originally made the fraudulent application. If this occurs the student must pay the out-of-state tuition differential for all the enrolled terms intervening between the fraudulent application and its discovery. Further, knowing falsification of responses on a resident status application may subject the applicant to disciplinary consequences, including dismissal from the institution.

Burden of Proof and Statutory Prima Facie Evidence

A person has the burden of establishing facts which justify his or her classification as a resident for tuition purposes. The balancing of all the evidence must produce a preponderance of evidence supporting the assertion of in-state residence. Under the Statute, proof of resident status is controlled initially by one of two evidentiary beginning points which are stated in terms of prima facie evidence.

a. Even if the person is an adult, if his or her parents (or court-appointed guardian in the case of some minors) are not legal residents of North Carolina, this is prima facie evidence that the person is not a legal resident of North Carolina unless he or she has lived in this state the five consecutive years prior to enrolling or re-registering. To overcome this prima facie showing of nonresidence, a person must produce evidence that he or she is a North Carolina domiciliary despite the parents' nonresident status.

b. Conversely, if the person's parents are domiciliaries of North Carolina under the Statute, this fact constitutes prima facie evidence that the person is a domiciliary of North Carolina. This prima facie showing may also be overcome by other evidence to the contrary. If a person has neither living parents nor legal guardian, the prescribed prima facie evidence rule cannot and does not apply.

Erroneous Notices Concerning Classification

If a student, who has been found to be a nonresident for tuition purposes, receives an erroneous written notice from an institutional officer identifying the student as a resident for tuition purposes, the student is not responsible for paying the out-of-state tuition differential for any enrolled term beginning before the classifying institution notifies the student that the prior notice was erroneous.

Grace Period

If a student has been properly classified as a North Carolina resident for tuition purposes and, thereafter, his or her state of legal residence changes while he or she is enrolled in a North Carolina public institution of higher education, the statute provides for a grace period during which the student is allowed to pay tuition at the in-state rate despite the fact that the student is no longer a North Carolina legal resident. This grace period extends for a minimum of twelve months from the date of change in legal residence, and if the twelve-month period ends during a semester or academic term in which the student is enrolled, the grace period extends also to the end of that semester or academic term.

Reacquisition of Resident Tuition Status

The prescribed twelve-month period of legal residence may be shortened if the person seeking to be classified as a resident for tuition purposes was formerly classified a North Carolina resident for tuition purposes, abandoned North Carolina domicile, and reestablished North Carolina domicile within twelve months after abandoning it. Interested persons should consult their admissions offices for a detailed explanation of the conditions which must be met to qualify under this section.

Appeals

A student appeal of a classification decision made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the classification decision. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in that Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded the opportunity to appear and be heard by the Committee. Any student desiring to appeal a decision of the Residence Status Committee must give notice in writing of that fact, within ten days of receipt by the student of the Committee's decision, to the Chairman of the Residence Status Committee, and the Chairman promptly processes the appeal for transmittal to the State Residence Committee. If a student has a residency application or appeal pending for a given term and does not register for that term, no further action will be taken on the application or appeal.

Tuition Payment. It is the responsibility of the student to pay tuition at the rate charged and billed while an appeal is pending. In effect, the student who is classified a nonresident at the time of tuition billing pays the nonresident rate. Conversely, if a student is classified as a resident at the time of billing, he or she pays the resident rate. Any necessary adjustments in the rate paid will be made at the conclusion of the appeal.

If a student withdraws from the University during a fall or spring semester, tuition and fees will be prorated over a period of nine weeks at a rate of one-tenth of the term's bill each week after deduction of an administrative charge. If a student withdraws during a summer session, tuition and fees will be prorated over a period of three weeks at a rate of one-fourth of the term's bill each week after deduction of the administrative charge. If a student drops the only course he or she is taking, this constitutes a withdrawal from the University.

Application of the Law to Specific Situations

Aliens

Aliens who are permanent residents of the U.S., or who hold a visa which will permit eventual permanent residence in the U.S., are subject to the same considerations with respect to determination of legal residence as citizens. An alien abiding in the U.S. under a visa conditioned at least in part upon intent not to abandon a foreign domicile (B, F, H, and J visas) cannot be classified a resident. An alien abiding in the U.S. under a visa issued for a purpose which is so restricted as to be fundamentally incompatible with an assertion by the alien of bona fide intent to establish a legal residence (C, D, and M visas) cannot be classified a resident.

Possession of certain other immigration documents may also allow an alien to be considered for in-state tuition status. For more details aliens should consult their admissions offices and the *Manual*. Aliens must file a Residence Status Supplemental Form in addition to the forms normally required of applicants for resident status for tuition purposes.

Married Persons

The domicile of a married person, irrespective of sex, is determined by reference to all relevant evidence of domiciliary intent. No person is precluded, solely by reason of marriage to a person domiciled outside of North Carolina, from establishing or maintaining legal residence in North Carolina. No person is deemed, solely by reason of marriage to a person domiciled in North Carolina, to have established or maintained a legal residence in

North Carolina. The fact of marriage and the place of the domicile of his or her spouse are deemed relevant evidence to be considered in ascertaining domiciliary intent.

If a person otherwise can demonstrate compliance with the fundamental statutory requirement that he or she be a legal resident of North Carolina before the beginning of the term for which resident status is sought, the second statutory requirement relating to duration of residence may be satisfied derivatively, in less than twelve months, by reference to the length of the legal residence of the person's spouse, if the spouse has been a legal resident of the State for the requisite twelve-month period.

Military Personnel

The domicile of a person employed by the Federal government is not necessarily affected by assignment in or reassignment out of North Carolina. Such a person may establish domicile by the usual requirements of residential act plus intent. No person loses his or her in-state resident status solely by serving in the armed forces outside of the State of North Carolina.

Minors

A minor is any person who has not reached the age of eighteen years. Under the common law, a minor child whose parents are not divorced or legally separated is presumed to have the domicile of his or her father. This presumption may be rebutted if a preponderance of the evidence indicates that the mother and father have separate domiciles *and* that, under the circumstances, the child can fairly be said to derive his or her domicile from the mother. If the father is deceased, the domicile of the minor is that of the surviving mother. If the parents are divorced or legally separated, the domicile of the minor is that of the parent having custody by virtue of a court order; or, if no custody has been granted by virtue of court order, the domicile of the minor is that of the parent with whom he or she lives; or, if the minor lives with neither parent, in the absence of a custody award, the domicile of the minor is presumed to remain that of the father. If the minor lives for part of the year with each parent, in the absence of a custody award, the minor's domicile is presumed to remain that of the father. These common law presumptions control even if the minor has lived in North Carolina for five years as set forth above in **Burden of Proof and Statutory Prima Facie Evidence,** subsection a.

In determining residence status for tuition purposes, there are three exceptions to the above provisions:

1. If a minor's parents are divorced, separated, or otherwise living apart and one parent is a legal resident of North Carolina, during the time period when that parent is entitled to claim, and does claim, the minor as a dependent on the North Carolina individual income tax return, the minor is deemed to be a legal resident of North Carolina for tuition purposes, notwithstanding any judicially determined custody award with respect to the minor.

   If, immediately prior to his or her eighteenth birthday, a person would have been deemed to be a North Carolina legal resident under this provision but he or she achieves majority before enrolling in a North Carolina institution of higher education, that person will not lose the benefit of this provision if the following conditions are met:

   a. Upon achieving majority the person must act, as much as possible, in a manner consistent with bona fide legal residence in North Carolina; and

   b. The person must begin enrollment at a North Carolina institution of higher education not later than the fall academic term next following completion of education prerequisite to admission at the institution.

2. If, immediately prior to beginning an enrolled term, the minor has lived in North Carolina for five or more consecutive years in the home of an adult relative (other than a parent) who is a legal resident of North Carolina, and if the adult relative, during those years, has functioned as a de facto guardian of the minor, then the minor is considered a legal resident of North Carolina for tuition purposes. If a minor qualified for resident status for tuition purposes under this provision immediately prior to his or her eighteenth birthday, then, upon becoming eighteen, he or she will be deemed to be a legal resident of North Carolina of at least twelve months' duration.

3. Even though a person is a minor, under certain circumstances the person may be treated by the law as being sufficiently independent from his or her parents as to enjoy a species of adulthood for legal purposes. If the minor marries or obtains a judicial decree of emancipation under N.C. Gen. Stat. §7A-717, *et seq.*, he or she is emancipated. The consequence, for present purposes, of such emancipation is that the affected person is presumed to be capable of establishing a domicile independent of that of the parents; it remains for that person to demonstrate that a separate domicile has, in fact, been established.

Prisoners

There are special provisions concerning domicile of prisoners. For more information, persons to whom these provisions may apply should consult the *Manual.*

Property and Taxes

Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

Students or prospective students who believe that they are entitled to be classified residents for tuition purposes should be aware that the processing of requests and appeals can take a considerable amount of time. A student is more likely to obtain a final decision on an application before tuition payment is due if he or she files the application several months in advance.

Military Tuition Benefit[1]

Certain members of the Armed Services, and their dependent relatives, who are not residents for tuition purposes may become eligible to be charged less than the out-of-state tuition rate under N.C. Gen. Stat. §116-143.3, the military tuition benefit provision. Any person seeking the military tuition benefit must qualify for admission to UNC-Chapel Hill and must file an application for the benefit with his or her admissions office before the first day of classes of the term for which he or she initially seeks the benefit. To remain eligible to receive the military tuition benefit, he or she must file another application for the benefit before the first day of classes of the first term in which he or she is enrolled in each academic year. The burden of proving eligibility for the military tuition benefit lies with the applicant for the benefit, and the application and all required supporting affidavits must be complete and in proper order before the first day of classes of the term in question. Because of the time involved in securing the necessary affidavits from the appropriate military authorities, prospective

[1] The information in this section comes from three sources: (i) North Carolina General Statutes, §116-143.3, (ii) *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes,* Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes and Determination of Eligibility for the Special Military Tuition Benefit.

applicants for the military tuition benefit are urged to secure application forms from their admissions offices and begin the application process several weeks before the first day of classes of the term for which they seek the benefit.

Eligibility of Members of the Armed Services

Eligible members of the Armed Services pay a rate of tuition computed by applying a statutory formula which is dependent, in part, on the amount of money payable by their Service employer to them or to the institution by reason of their enrollment. Application of the statutory formula yields the following results: if the service member's education is being fully funded by the Service employer, the amount of tuition owed is equal to out-of-state tuition; if the member's education is not being funded by his or her Service employer, he or she pays an amount equal to in-state tuition; and if the Service employer is providing partial educational funding, the amount of tuition owed depends on the amount of funding contributed by the Service employer.

To be eligible for this military tuition benefit, the individual must

a. be a member of the United States Air Force, Army, Coast Guard, Marine Corps, Navy, North Carolina National Guard, or a reserve component of one of these services; and

b. be abiding in North Carolina incident to active military duty which is performed at or from a duty station in North Carolina.

Eligibility of Dependent Relatives of Service Members

If the service member meets the conditions set forth above, his or her dependent relatives may be eligible to pay the in-state tuition rate if they share the service member's North Carolina abode; if they have complied with the requirements of the Selective Service System, if applicable; and if they qualify as *military* dependents of the service member.

If the service member voluntarily ceases to live in North Carolina or is involuntarily absent from the state on military orders (other than absences on routine maneuvers and temporary assignments), he or she is deemed to have moved his or her abode from North Carolina. If a dependent relative of a service member has become eligible for the military tuition benefit and, after the beginning of the term of eligibility, the service member moves his or her abode from North Carolina, the dependent relative will continue to be eligible for the military tuition benefit only for the remainder of that academic year. An academic year runs from the first day of classes of the fall semester through the last day of exams of the following summer session, second term.

For a detailed explanation of the military tuition benefit provision (including an explanation of the formula used to compute the tuition rate for service members), a complete list of categories of persons who are considered "dependent relatives" for purposes of establishing eligibility for the military tuition benefit, and information about the registration requirements of the Selective Service System, applicants should consult *A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes* (as amended September 1985). This *Manual* is available for inspection in the Admissions Offices of the University. Copies of the *Manual* are also on reserve at the Robert B. House Undergraduate Library, and in the Reserve Reading Room of the Health Sciences Library.

Appeals of Eligibility Determinations of Admissions Officers

A student appeal of an eligibility determination made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the eligibility determination. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in that Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded an opportunity to appear and be heard by the Committee.

Any student desiring to appeal a determination of the Residence Status Committee must give notice in writing of that fact to the Chairman of the Residence Status Committee within ten days of receipt of the Committee's decision. The Chairman will promptly process the appeal for transmittal to the State Residence Committee.

Family Educational Rights and Privacy Act

As a general rule, under the federal Family Educational Rights and Privacy Act (FERPA), personally identifiable information may not be released from a student's education records without his or her prior written consent. Exceptions to this rule are set out in the FERPA regulations and the FERPA policy of The University of North Carolina at Chapel Hill.

UNC-Chapel Hill will disclose personally identifiable information from the education records of a student, without the student's prior written consent, to officials of another school or school system in which the student seeks or intends to enroll. UNC-Chapel Hill will also disclose personally identifiable information from an enrolled student's education records, without the student's prior written consent, to officials of another school or school system in which the student is contemporaneously enrolled. Time, building, and room number information from a student's class schedule will be disclosed to the University Police to assist them in serving the student with a warrant or subpoena.

UNC-Chapel Hill makes public certain information that has been designated as "directory information": the student's name, address, telephone listing, date and place of birth, major field of study, class, enrollment status (full-time, half-time, or part-time), anticipated graduation date, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. Examples of ways in which some of this information is made public include: names of students who receive honors and awards, who make the Dean's List, who hold offices, or who are members of athletic teams. The annual commencement program publishes the names of degree recipients. The University also publishes the *Campus Directory* annually, and some professional and graduate student groups publish directories of students in their departments or schools.

Students who do not wish to have any or all "directory information" made public without their prior consent, must send the Office of the University Registrar (CB# 2100, 105 Hanes Hall, The University of North Carolina at Chapel Hill) a signed and dated notice specifying items that are not to be published. To ensure that a listing for the student will not appear in the *Campus Directory*, this notice must be received by the Office of the University Registrar by the end of the registration period for the semester or session of first enrollment or, after an absence, of reenrollment. Such a notice will be honored until the student graduates, ceases to attend, or withdraws from the University unless the student notifies the Office of the University Registrar to the contrary in writing.

Students also have the right to inspect their "education records" as defined in the FERPA regulations. They may not inspect financial records and statements of their parents; confidential letters of recommendation placed in their education records before January 1, 1975 (with some exceptions); or confidential letters of recommendation placed in their education records after January

1, 1975, if they have waived their rights to inspect and review such letters.

A student who believes that information in his or her education records is inaccurate or misleading or violates his or her privacy or other rights may request that the institution amend the records, and, if the request is denied, he or she has the right to a hearing. If, after the hearing, the institution decides that the information is not inaccurate, misleading, or violative of privacy or other rights, the student has a right to place a statement in those records commenting on the information in question or giving the student's reasons for disagreeing with the institutional decision. The student may also place such a statement in his or her records in lieu of requesting a hearing if the student and the institution agree that an explanatory statement alone is the appropriate remedy. Complaints alleging violations of FERPA rights may also be filed with the U.S. Department of Education.

Questions about FERPA should be addressed to the Legal Adviser to the Special Assistant to the Chancellor (CB# 9150, 01 South Building). The text of FERPA and its regulations and the University's FERPA policy are also available for inspection in 01 South Building.

Firearms and Other Weapons

The possession of any gun, rifle, pistol, dynamite cartridge, bomb, grenade, mine, explosive, bowie knife, dirk, dagger, slingshot, leaded cane, switchblade knife, blackjack, metallic knuckles, or any other weapons of like kind upon any University campus or in any University owned or operated facility is unlawful and contrary to University policy. Violation of this prohibition is a misdemeanor punishable by a fine not to exceed $500 and/or six months' imprisonment, and may constitute a violation of the Campus Code.

Immunization Requirement

Effective July 1, 1986, North Carolina State law requires that no person shall attend a college or university in North Carolina unless a certificate of immunization indicating that the person has received the immunizations required by the law is presented to the college or university on or before the first day of matriculation. Students enrolled at UNC-Chapel Hill on July 1, 1986 are exempt from this requirement.

If the UNC-Chapel Hill Medical History Form containing the certificate of immunization is not in the possession of the UNC-Chapel Hill Student Health Service ten (10) days prior to the registration date, the University shall present a notice of deficiency to the person. The person shall have 30 calendar days from the first day of attendance to obtain the required immunizations. Those persons who have not complied with the immunization requirements by the end of 30 calendar days will be *administratively withdrawn* from the University.

The University of North Carolina at Chapel Hill Policy on Illegal Drugs

I. Introduction

The Board of Trustees of The University of North Carolina at Chapel Hill, in conformity with the direction of the Board of Governors of The University of North Carolina, hereby adopts this Policy on Illegal Drugs, effective August 24, 1988. It is applicable to all students, faculty members, administrators, and other employees.

II. Education, Counseling, and Rehabilitation

A. The University of North Carolina at Chapel Hill has established and maintains a program of education designed to help all members of the university community avoid involvement with illegal drugs. This educational program emphasizes these subjects:

1. The incompatibility of the use or sale of illegal drugs with the goals of the university;
2. The legal consequences of involvement with illegal drugs;
3. The medical implications of the use of illegal drugs; and
4. The ways in which illegal drugs jeopardize an individual's present accomplishments and future opportunities.

B. The University of North Carolina at Chapel Hill provides information about drug counseling and rehabilitation services available to members of the university community through campus-based programs and through community-based organizations. Persons who voluntarily avail themselves of university services are hereby assured that applicable professional standards of confidentiality will be observed.

III. Enforcement and Penalties

A. The University of North Carolina at Chapel Hill shall take all actions necessary, consistent with State and Federal law and applicable university policy, to eliminate illegal drugs from the university community. The University's Policy on Illegal Drugs is publicized in catalogs and other materials prepared for all enrolled and prospective students and in materials distributed to faculty members, administrators, and other employees.

B. Students, faculty members, administrators, and other employees are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the university community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the university. It is not "double jeopardy" for both the civil authorities and the university to proceed against and punish a person for the same specified conduct. *The university will initiate its own disciplinary proceeding against a student, faculty member, administrator, or other employee when the alleged conduct is deemed to affect the interests of the university.*

C. Penalties will be imposed by the university in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees, as required by Section 3 of the Trustee Policies and Regulations Governing Academic Tenure in The University of North Carolina at Chapel Hill, by Section III.D of the Employment Policies for EPA Nonfaculty Employees of The University of North Carolina at Chapel Hill, by regulations of the State Personnel Commission, and the Disciplinary Procedure of the Staff Personnel Administration Guides (SPAG 37), by the Instrument of Student Judicial Governance, and by all other applicable provisions of the policies and procedures of The University of North Carolina at Chapel Hill.

D. The penalties to be imposed by the university may range from written warnings with probationary status to expulsions from enrollment and discharges from employment. However, the following minimum penalties shall be imposed for the particular offenses described.

1. *Trafficking in Illegal Drugs*

a. For the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedule I, N.C. General Statutes 90–89, or Schedule II, N.C. General Statutes 90–90 (including, but not limited to, heroin, mescaline, lysergic acid diethylamide, opium, cocaine, amphetamine, methaqualine,) any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.

b. For a first offense involving the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, (including, but not limited to, marijuana, anabolic steroids, pentobarbital, codeine), the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[1] For a second offense, any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.

2. *Illegal Possession of Drugs*

a. For a first offense involving the illegal possession of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90, the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent.[2]

b. For a first offense involving the illegal possession of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, the minimum penalty shall be probation, for a period to be determined on a case-by-case basis. A person on probation must agree to participate in a drug education and counseling program, consent to regular drug testing, and accept such other conditions and restrictions, including a program of community service, as the Chancellor or the Chancellor's designee deems appropriate. Refusal or failure to abide by the terms of probation shall result in suspension from enrollment or from employment for any unexpired balance of the prescribed period of probation.[3]

c. For a second or other subsequent offenses involving the illegal possession of controlled substances, progressively more severe penalties shall be imposed, including expulsion of students and discharge of faculty members, administrators, or other employees.

E. Suspension Pending Final Disposition

When a student, faculty member, administrator, or other employee has been charged by the university with a violation of policies concerning illegal drugs, he or she may be suspended from enrollment or employment before initiation or completion of regular disciplinary proceedings if, assuming the truth of the charges, the Chancellor, or in the Chancellor's absence, the Chancellor's designee concludes that the person's continued presence within the university community would constitute a clear and immediate danger to the health or welfare of other members of the university community; provided, that if such a suspension is imposed, an appropriate hearing of the charges against the suspended person shall be held as promptly as possible thereafter.

IV. Implementation and Reporting

Annually, the Chancellor shall submit to the Board of Trustees a report on campus activities related to illegal drugs for the preceding year. The reports shall include, as a minimum, the following:

(1) a listing of the major education activities conducted during the year;

(2) a report on any illegal drug-related incidents, including any sanctions imposed;

(3) an assessment by the Chancellor of the effectiveness of the campus program and;

(4) any proposed changes in the Policy on Illegal Drugs.

A copy of the report shall be provided to the President, who shall confer with the Chancellor about the effectiveness of campus programs.

[1]Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[2]Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.

[3]If this balance for an employee subject to the State Personnel Act exceeds three days, that employee shall be discharged.

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Published by
The University of North Carolina at Chapel Hill
Chapel Hill, N.C.

Designed By Office of Design Services

Send all undeliverable copies and changes of address to
the School of Law, The University of North Carolina at Chapel Hill,
Chapel Hill, NC 27599

School of Law Editor
Karen Haywood

5,000 copies of this public document were printed at a cost of $9,850.00, $1.97 per copy.

School of Law
The University of North Carolina at Chapel Hill
CB #3380, Van Hecke-Wettach Hall
Chapel Hill, NC 27599-3380

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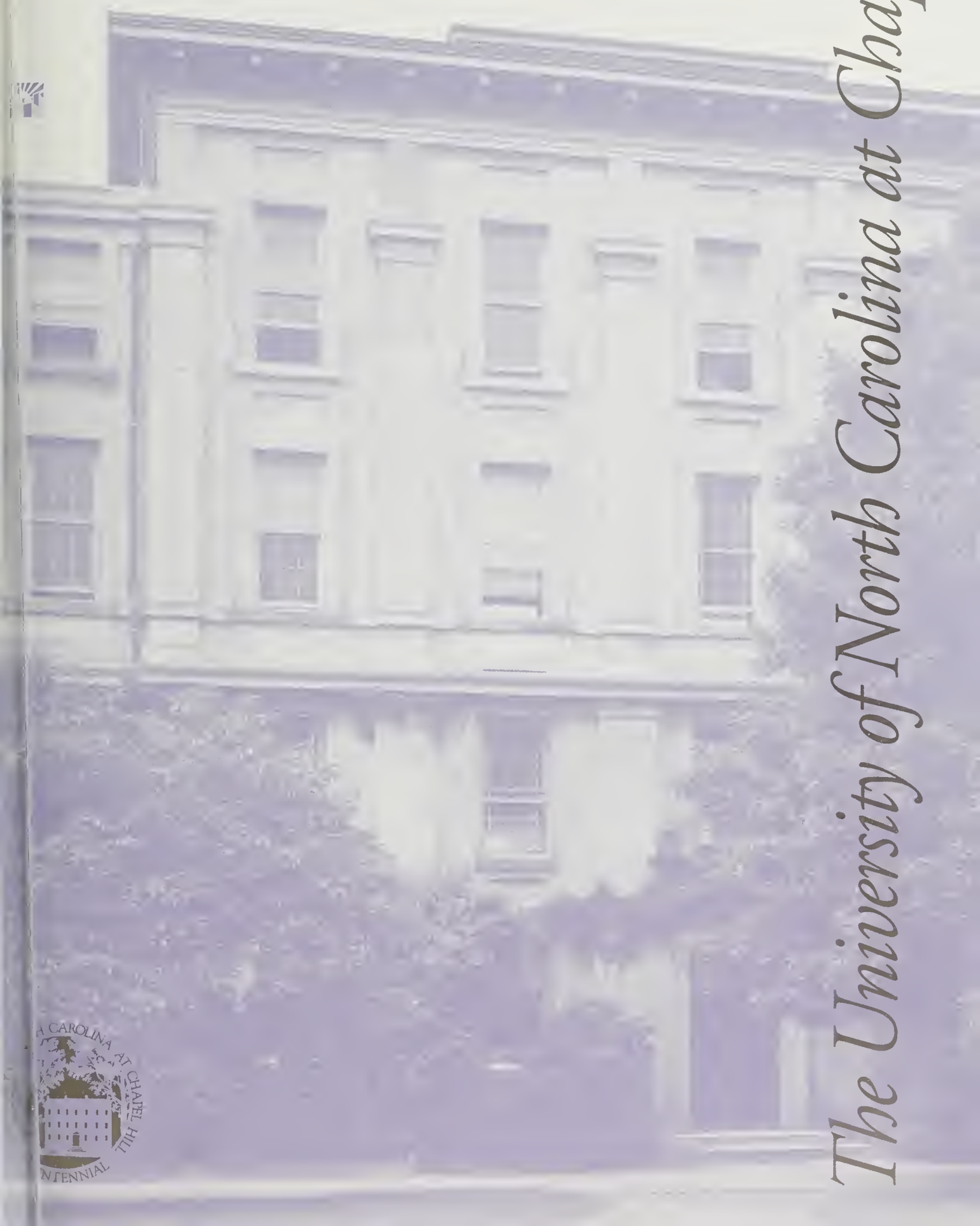
Department of City & Regional Planning

993-1995 Record



The University of North Carolina at Chapel Hill

Mission Statement

The University of North Carolina at Chapel Hill has been built by the people of the State and has existed for two centuries as the nation's first state university. Through its excellent undergraduate programs, it has provided higher education to ten generations of students, many of whom have become leaders of the State and the nation. Since the nineteenth century, it has offered distinguished graduate and professional programs.

The University is a research university. Fundamental to this designation is a faculty actively involved in research, scholarship, and creative work, whose teaching is transformed by discovery and whose service is informed by current knowledge.

The mission of the University is to serve all the people of the State, and indeed the nation, as a center for scholarship and creative endeavor. The University exists to expand the body of knowledge; to teach students at all levels in an environment of research, free inquiry, and personal responsibility; to improve the condition of human life through service and publication; and to enrichour culture.

To fulfill this mission, the University must: acquire, discover, preserve, synthesize, and transmit knowledge; provide high quality undergraduate instruction to students within a community engaged in original inquiry and creative expression, while committed to intellectual freedom, to personal integrity and justice, and to those values that foster enlightened leadership for the State and the nation; provide graduate and professional programs of national distinction at the doctoral and other advanced levels to future generations of research scholars, educators, professionals, and informed citizens; extend knowledge-based srvices and other resources of the University to the citizens of North Carolina and their institutions to enhance the quality of life for all people in the State; and address, as appropriate, regional, national, and international needs.

This mission imposes special responsibilities upon the faculty, students, staff, administration, trustees, and other governance structures and constituencies of the University in their service and decision-making on behalf of the University.

April 25, 1986 as adopted by the Board of Trustees, The University of North Carolina at Chapel Hill.

Department of City & Regional Planning

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About the Department

The Department of City and Regional Planning is one of the oldest and largest programs of graduate planning study and research in the United States. Founded in 1946 to demonstrate the practical application of social science methods to problems of government, it became the first planning program in the nation with its principal university base in the social sciences rather than in landscape design, architecture, or engineering. It has retained and strengthened that social science legacy while expanding the extent and breadth of its programs to include a full range of graduate planning study and research. The graduate instruction and research program today is concentrated in four focus areas: economic development; land use and environmental planning; housing, real estate, and community development; and transportation, infrastructure, and government finance. Students define programs of study within the four areas and may combine interests in more than one area. In addition, students may pursue a minor in planning in developing areas.

The department offers a two-year program leading to the Master of Regional Planning degree; a doctoral program leading to the Ph.D. degree; and several dual degree opportunities. The Master of Regional Planning (MRP) program helps capable individuals develop the specific skills, decision-making ability, and breadth of judgment needed for positions of leadership in the planning profession. The doctoral program in planning strongly emphasizes research and is designed for individuals who seek careers in academic research and teaching or in applied research with governmental or private organizations. The dual degree programs with Business, Law, and Public Administration are designed to minimize the time necessary for students with interests in related areas of graduate study to earn degrees in both fields. The formal minor in planning in developing countries, is also available, consisting of courses on the spatial, economic, financial, and political problems facing such countries and theoretical perspectives on their causes.

The department's distinguished faculty members hold advanced degrees from the nation's most prestigious universities in a broad range of planning and policy-related fields of study, including economics, public finance, man-environment relations, water resources engineering, and transportation, as well as planning and public policy.

The faculty attracts excellent students, and the department's record of career placements is exceptional. The department's more than 1,300 alumni hold positions in this country and abroad as directors of planning departments of large and small cities; as directors of state and regional planning programs; as associate and assistant planners in city, county, metropolitan, and regional planning agencies, in housing and urban development agencies, and in various branches of the federal service; as executives or staff members in public interest organizations and associations, research organizations, private development firms, and banks; as private consultants; as advisers to communities and developing areas; and as deans, chairs, and faculty members of educational institutions.

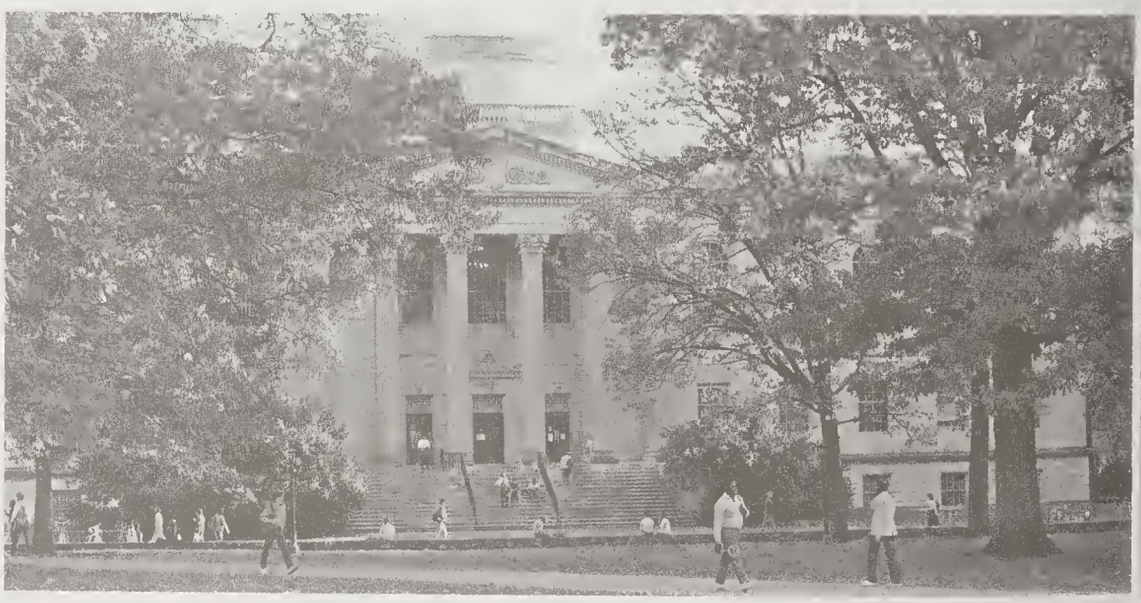
The program of instruction in city and regional planning reflects the breadth of the faculty's academic and research backgrounds with over 50 formal courses offered within the department each year. Additional instructional opportunities are abundant in the many graduate and professional degree programs of The University of North

Carolina at Chapel Hill and nearby at Duke University, North Carolina State University, and North Carolina Central University, where UNC-Chapel Hill students can take courses without paying additional tuition. Sufficient flexibility in the program allows students to take advantage of the wide array of instructional possibilities in planning a graduate curriculum which suits their career needs.

Students come to the department from all parts of the United States, Canada, and many other countries. The educational backgrounds of students who have entered the department and now hold positions of responsibility in the planning profession cover a wide range of undergraduate fields. The educational backgrounds include study in architecture, biology, business, economics, engineering, forestry, geography, geology, history, landscape architecture, philosophy, political science, psychology, public administration, sociology, and urban studies. While some begin studies upon completion of undergraduate work, a larger number of individuals come to the department after several years of experience in planning or other fields, or for mid-career study.

Students in the department are very active. They publish a nationally recognized journal, Carolina Planning, twice a year, focusing on planning issues in the southeast United States. Student projects have won several national awards from the American Planning Association in recent years. Planning students, collaborating with students from the School of Law and Kenan-Flagler Business School, have sponsored and built homes through the Habitat for Humanity program and raised money for worthy causes in the U.S., Central America, Eastern Europe, and other parts of the world. Students serve on departmental committees, including curriculum, admissions, and special purpose committees. Planner's Forum, the planning student organization, sponsors a vigorous intramural sports program, an active social agenda, and a program of visiting speakers.

The University is near other educational and research institutions. The University is part of the Research Triangle, which ranks first among the

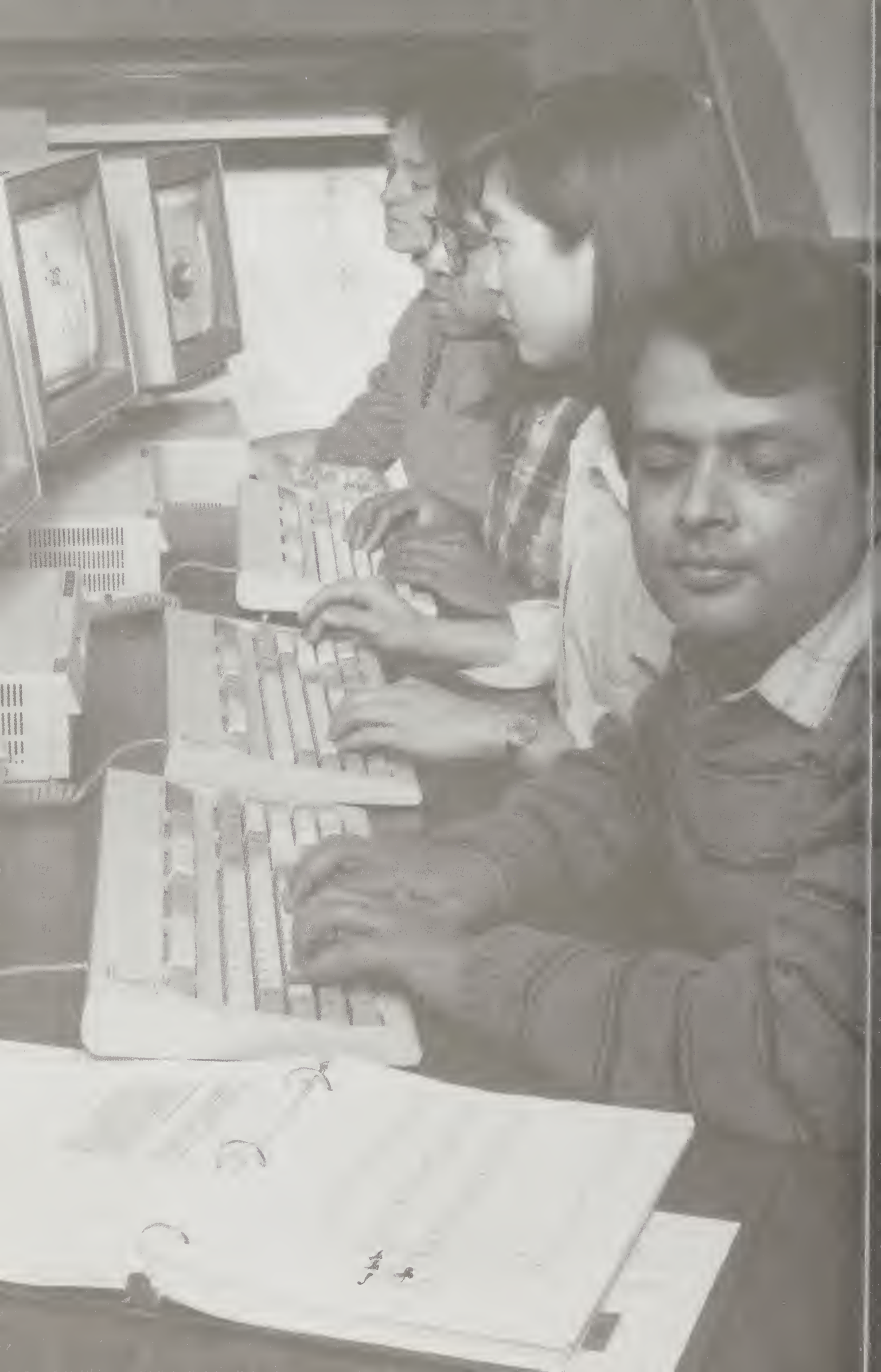


Wilson Library on the UNC-Chapel Hill campus.

nation's 100 largest metropolitan centers for the number of Ph.D. scientists and engineers per 100,000 population. The Triangle includes corporate and government research facilities in nearby Research Triangle Park, and Duke University in nearby Durham and North Carolina State University in state capital Raleigh. The department benefits from the close associations through the appointment of selected adjunct faculty members from the many advanced professionals who work in the region. Students have easy access to courses at Triangle universities, and faculty and students use Durham, Raleigh, Chapel Hill, other Triangle communities, and nearby rural counties as laboratories for course and field work.

The University sits atop the central hill in Chapel Hill, a stimulating and beautiful place in which to live. A university town of 38,000, Chapel Hill combines the advantages of a small community with the social and intellectual resources of a unique population center of 600,000 in the Triangle area. It is also a relatively short drive from Chapel Hill to Washington, D.C. to the north, Atlanta to the south, the Great Smoky Mountains in the west and to the Atlantic Coast beaches and Outer Banks in the east.

Graduate students will find that campus life offers a wide range of professional, cultural, and intellectual activities, an exciting intercollegiate athletic program of national prominence, and extensive intramural athletic opportunities.



The Professional Master's Degree Program

The Master's Program prepares students for professional planning practice and provides the grounding in theory and methods needed to sustain a long-term career. Students can best meet these aims through a three-level program of study that combines 1) a general core curriculum that all students take to provide a foundation for further study, 2) a specific area of specialization in which specific competencies are attained, and 3) electives through which students add knowledge in areas of special interest. The program consists of 48 credit hours of coursework. In addition, students must submit a Master's Project at the end of their second year to complete their degree requirements.

Each student is assigned a faculty adviser, who helps design a customized program of study consistent with the student's own interests. Students select an area of specialization and elective courses and propose a Master's Project to meet their specific educational objectives.

CORE CURRICULUM

The core curriculum offers the foundation theory and skills required by planners as a basis for practice, regardless of the particular geographic area, planning specialization, level of government, or cultural context in which they plan to work after graduation. It includes specific courses in planning theory, urban spatial structure, quantitative methods, economics, as well as selected courses in law and a capstone workshop.

All students must build a solid foundation by taking the core curriculum or by demonstrating mastery of core subjects. Planning theory, urban spatial structure, and quantitative methods courses are taken by all students except those with appropriate prior graduate coursework in planning. Economics is required unless the student has sufficient prior training in intermediate microeconomics. Quantitative analysis can be exempted by passing a screening exam given at the outset of the first semester.

The five core courses are:

PLAN 204	Planning Theory (3) Fall or Spring.
PLAN 214	Urban Spatial Structure (3) Fall.
PLAN 130	Quantitative Analysis for Planners and Public Managers (3) Fall.
PLAN 131	Quantitative Methods in Planning (3) Spring.
PLAN 210	Economic Analysis for Public Policy Planning (3) Fall.

In addition, students take a workshop course during their second year and a law course. Several workshop courses, listed as PLAN 222 or 223, are offered each semester. The workshop course requires professional-level application of theory, methods, and policy knowledge to a real problem defined by an actual client in the public or private sector. It allows students to apply skills learned in their chosen area of specialization. There are also several appropriate courses in planning-related law. The student chooses the course most closely associated with her or his area of interest.

AREA OF SPECIALIZATION

To build on the core curriculum, each student selects an area of specialization from one of four focus areas: economic development; housing, real estate and community development; land use and

environmental planning; or transportation, infrastructure, and government finance. Each focus area has its own required courses designed to help students develop special competence with which to begin their professional careers. Several of the focus areas allow for further choice in specialization. Each focus area is described in its own section on the following pages, including the types of careers for which the specializations are designed, the positions held by recent graduates, and the specific courses required.

ELECTIVE COURSES

Beyond the core and area of specialization, students may choose from a variety of course offerings in city and regional planning and in other departments of the University and affiliated universities in the Research Triangle or abroad. Students can deepen their knowledge by taking electives within their area of specialization. Or they can broaden their educational experience by pursuing another area of specialization within the department or by taking electives inside or outside of the department. A number of relevant courses are available at no extra cost at Duke University and North Carolina State University through a special interuniversity agreement.

Students with a special interest in developing areas of the world may also take a formal minor in planning in developing areas, in addition to their area of specialization. The minor requires three courses with departmental faculty who teach and work in this institutional and geographic context. Additional elective-courses are available.

Students who want to supplement their planning education with study abroad may pursue a comparative study semester in one of 20 European universities (in eight countries) with which UNC- Chapel Hill has exchange agreements. The Department of City and Regional Planning faculty have developed a special relationship with development economists and planners with the Interdisciplinary Institute for Urban and Regional Studies at the Vienna University of Economics and Business. A well-established student exchange semester in Vienna provides an unrivaled opportunity for students to undertake a program of supervised study in the heart of Europe.

The department offers three dual degree programs: a four-year program in planning and law, a three-year program in planning and business, and a three-year program in planning and public administration.

The department regularly offers at least one and often two courses in historic preservation. This is a field that has evolved from preservation of specific landmarks to a more significant and broad-based movement to revitalize downtowns, preserve neighborhoods, provide affordable housing, and save rural landscapes. The department also distributes a listing of relevant courses elsewhere in UNC, Duke, and North Carolina State University for the student wishing to focus on preservation as a planning strategy and goal.

MASTER'S PROJECT

All candidates for the MRP degree are required to write an acceptable masters project. The project is an original piece of work involving a substantial degree of independent research and analysis of a topic related to planning practice. Students select a topic that is meaningful for their particular academic or professional interests.

Economic Development

Throughout the U.S., planners help develop urban and regional economies that meet the needs of all citizens. Needs are often greatest in the nation's most distressed urban and rural regions, but economic development problems are found in rapidly growing regions as well. Urban and regional economic development planners are increasingly important to the economic well-being of workers, firms, and communities in every part of the country. The planner's role takes on added significance during the fierce international competition underway between regions, countries, and whole continents (e.g., European Community and North American Free Trade Agreement).

Of equal importance are the policy mixes and approaches to local economic development that are being designed, tested and implemented by planners in cities and states, the places President Woodrow Wilson called "the laboratories of democracy." These approaches are the direct local response to recent decades of economic change that now show up as uneven burdens and benefits for workers and residents. While national policy is important, it has proven inadequate to the task of helping localities cope with severe economic restructuring, loss of well-paying jobs, and overall loss of their economic and tax base. Economic opportunity and mobility have diminished rapidly for youth leaving school, for workers who wish to improve their job positions, and for persons nearing retirement who become stranded without realistic employment prospects.

Restructuring frequently leads to underuse or abandonment of human resources, existing capital facilities, and inputs supplied by local firms. At the same time, the consequent loss of local tax base and abandoned resources generates new risks to the environment and to the quality of life. As these problems accumulate, the capacity of a local economy to absorb and recover from adverse effects steadily diminishes. Planners are now taking the lead to help their communities install business incubators, launch effective enterprise zones, design appropriate training and education programs, supply efficient and effective infrastructure, calibrate realistic tax and incentive policies, promote competitive industrial districts and export platforms, and implement other elements of a full policy mix.

Many of the policy models now attracting the greatest attention were originally developed in Europe (e.g., Enterprise Zones) or developing countries (e.g., Microenterprise Funds). Students are encouraged to build their programs of study around an exchange semester, internship or other contact with international experts through the department's International Applications Program. Further opportunity to study these and other economic development policies is available in the Research Triangle and throughout the many cities, towns and regions of the South Atlantic Sunbelt.

CAREER OPPORTUNITIES

Courses in economic development prepare students to work effectively when harnessing public and private resources to design, test, implement, and evaluate effective economic development strategies and to do so in widely varying development organizations.

Students specializing in economic development find responsible and challenging careers in many different settings and locations. Graduates are employed by local and state economic development agencies, Community Development Corporations (CDCs) and other nonprofit community-based organizations, quasi-public economic development corporations and authorities, private businesses engaged in development finance, and private economic and planning consulting firms.

Examples of early- to midcareer positions taken by recent graduates include: Charles Teller (MRP 1993), Economic and Planning Systems, Berkeley, CA; Nicole Thompson (MRP 1993), N.C. Institute of Minority Economic Development, Raleigh N.C.; Will Hearn (MRP 1992), regional economic planner, Conran Roche Planning, Berlin, Federal Republic of Germany; David Cristeal (MRP 1992), community development planner, Wake County, NC; Susan Gibbs (MRP 1991), associate, Hammer, Siler, & George Associates, Silver Spring, Md.; Eliza Berlow (MRP 1988), development specialist, Pennsylvania Avenue Develop-ment Corporation, Washington, DC; Jeanine Jacokes-Powell (MRP 1988), staff, U.S. Senate Banking Committee, Washington, DC; and Gerald Birkelbach (MRP 1987), Executive Director, Montgomery County Industrial Development Authority, Montgomery County, PA.

BACKGROUND AND PREPARATION OF STUDENTS

Students who specialize in economic development come to the department from a variety of backgrounds, but many are likely to have undergraduate training in one of the social science disciplines, to have some work or volunteer experience, and to be interested in social and economic change at the local level. While useful, highly quantitative backgrounds are not essential for academic and professional success in this specialization, nor is extensive coursework in economics necessary. The strategic application of planning methods to economic concepts and data, however, are important skills that students of all backgrounds will be able to master while in the program.

Because economic development is a relatively recent area of specialization in the planning profession, the concepts, analytic techniques, policies, programs, and tools employed are continually created and refined in the planning program at The University of North Carolina at Chapel Hill. The creation and refinement occurs through close interaction on all phases of coursework and research among faculty, students in the professional master's degree program, and Ph.D. students.

COURSE OF STUDY

All students complete the basic planning core curriculum and the four courses in the area of specialization listed below. For the balance of the program (5 or 6 courses), students are encouraged to work closely with their adviser and other economic development faculty to design a customized program of study consistent with their own interests. They may choose from a variety of course offerings in city and regional planning and com-

bine them with courses available in other departments of the University and affiliated universities in the Research Triangle, or study abroad in some international application area. Finally, students must submit a Masters Project at the end of their second year to complete their degree requirements.

Economic Development Core Curriculum

PLAN 261	Urban and Regional Economic Development (3) Spring.
PLAN 263	Development Planning Techniques (3) Spring.
PLAN 226	State and Local Public Finance (3) Fall.
PLAN 264	Regional Development Theory (3) Fall.

Students may take any law course, but the labor law course is most appropriate.

In addition to building on the core courses, electives, and co-specialization courses in the department, students may cross-register for three-year, joint-degree programs in planning (MRP) and business administration (MBA) for private-sector management, or planning (MRP) and public administration (MPA) for strengthened public-sector careers. A four-year, joint program with the School of Law is useful for students who wish to develop strong institutional and legal approaches to development planning.

FACULTY—THEIR TEACHING RESPONSIBILITIES AND RESEARCH INTERESTS

EDWARD M. BERGMAN
Professor and Director, Economic Development Focus Area; Director, Institute for Economic Development; BS, Michigan State; MCP, Ph.D., Pennsylvania. Since joining the faculty in 1972, Professor Bergman has taught courses primarily in local economic development, urban and industrial policy, comparative regional development, and planning theory. Following his Fulbright fellowship in Vienna, he organized and directs a student/faculty exchange program between DCRP and the Vienna University of Economics. Dr. Bergman works closely with colleagues at the North Carolina Rural Economic Development Center, Bergman and Hammer Ltd., Woodrow Wilson International Center's Urban Studies Project, National Rural Studies Committee, Central European Regional Research Organization, and other public and private groups.

Professor Edward Bergman.

Professor Bergman's research agenda has received funding support from foundations (Ford, Kellogg, Aspen, Volkswagen, Mary Reynolds Babcock, etc.), federal agencies (EDA, NSF, DOT, HUD, DOL), and various state development offices. His research focuses on economic networks and industrial districts, industrial restructuring among urban and rural regions, development infrastructure and modernization policy, regional development mod-

els of state and local economies, and comparative U.S.-European regional development.

Selected publications:

"Infrastructure and Manufacturing Productivity in a Regional Accessibility System," (with Daoshan Sun), in *Infrastructure, Economic Growth and Regional Development: The Case of High Income Countries*, forthcoming.

"Spatial Diffusion of Development: Spread and Backwash Reconsidered," (with Gunther Maier) in Regions Reconsidered, 1991.

Regions Reconsidered: Economic Networks, Innovation and Local Development in Industrialized Countries. Edward Bergman, Gunther Maier and Franz Todtling, eds., London: Cassell, 1991.

"Urban Innovation and Technological Advance in the Research Triangle Region" (with Harvey Goldstein), in Sustainability of Urban Systems: A Cross-National Evolutionary Analysis of Urban Innovation, P. Nijkamp, ed., Brookfield, VT: Gower, 1990.

"State Innovation Policies and Regional Restructuring of Technologically Dependent Industry," in Growth Policy in the Age of High Technology: The Role of Regions and States, J. Schmandt and R. Wilson, eds., Boston: Unwin Hyman, 1989.

"Industrial Growth and Restructuring of Metropolitan Regions," in Deindustrialization and Regional Economic Transformation, Lloyd Rodwin and Hidehiko Sazanami, eds., Boston: Unwin Hyman, 1989.

GLENN CASSIDY
Assistant Professor. SB, Massachusetts Institute of Technology; MPA, University of Texas; Ph.D., Carnegie Mellon University. (See Transportation, Infrastructure, and Government Finance Focus Area for biographical sketch).

HARVEY A. GOLDSTEIN
Professor, Director, Ph.D. Program. Professor; BS, Columbia; MA, MCP, Ph.D., Pennsylvania. Dr. Goldstein teaches methods and techniques of urban and regional economic analysis, policy-oriented research design, and planning theory. His recent research has focused on science and technology as an engine for regional economic development, comparative regional technology policies (U.S. and Europe), location of high technology industries, and the improvement of economic impact assessment and forecasting methods. Dr. Goldstein's research has been funded by the National Science Foundation, the U.S. Department of Labor, the U.S. Department of Transportation, HUD, the Ford Foundation, the DAAD of the Federal Republic of Germany, the Kenan Institute of Private Enterprise, and various state government agencies. He has worked as a consultant to universities, local and state governments, the United Nations, the World Bank, and private firms performing economic impact analyses, developing regional economic forecasts, and training government officials.

Selected publications:

"High Technology and Regional Economic Development," (coauthor) in R. Bingham et al., Economic Development in the United States: A Theoretical Perspective, Sage Publications, 1993.

"Growth Centers vs. Indigenous Development Strategies: The Case of Research Parks," in Technology, Innovation, and Local Development, F. Todtling, G. Maier, and E. Bergman, eds. London: Cassell Publishers, 1991.

Technology in the Garden (coauthor). Chapel Hill: The University of North Carolina Press, 1991.

"A Practitioner's Guide to State and Substate Industry Employment Projections," Economic Development Quarterly, Vol. 4, No. 3, August 1990.

"Regional Policies, the State, and the Pattern of Regional Economic Development in the Postwar Era," Economie Regionale et Urbaine, No. 5, 1990.

The State and Local Industrial Policy Question, ed. Chicago: APA Planners Press, 1987.

MICHAEL I. LUGER
Professor, Director, Public Policy Analysis Program; AB, MPA, Princeton; MCP, Ph.D., California. (See Transportation, Infrastructure, and Government Finance for biographical sketch)

EMIL E. MALIZIA
Professor, Associate Chair of the Department, and Director, Economic Development Course, Institute for Economic Development; BA, Rutgers; MRP, Ph.D., Cornell. (See Housing, Real Estate and Community Development for biographical sketch)

SUPPORTING FACULTY

THOMAS R. HAMMER
Adjunct Professor. Director, NCI Research, Evanston, IL: President, Bergman and Hammer, Ltd., Chapel Hill, NC. BA, Harvard; Ph.D., Pennsylvania.

STUART A. ROSENFELD
Adjunct Professor. Director. Southern Technology Council and Deputy Director, Southern Growth Policies Board, Research Triangle Park, BS, University of Wisconsin-Madison; MS, University of Wisconsin-Milwaukee; Ed.D., Harvard.

AFFILIATED FACULTY AT THE VIENNA UNIVERSITY OF ECONOMICS AND BUSINESS

GUNTHER MAIER
Assistant Professor. Ph.D., Vienna University of Economics (Regional Economics)

ANDREAS NOVY
Assistant Professor, Ph.D., Vienna University of Economics (Regional Development)

HERWIG PALME
Associate Professor. Ph.D., Vienna University of Economics (Business Administration)

UWE SCHUBERT
Associate Professor. Ph.D., University of California, San Diego; Ph.D., Vienna University of Economics (Urban Economics)

WALTER B. STÖHR
Professor. (emerited) Ph.D., Vienna University of Economics (Economic Geography)

FRANZ TÖDTLING
Associate Professor. Ph.D., Vienna University of Economics (Industrial Economics)

Housing, Real Estate and Community Development

The Housing, Real Estate and Community Development focus area covers the development of subsidized and market rate residential and commercial properties and the revitalization of urban neighborhoods. It considers these activities from the perspectives of both the public and private sectors. The focus area is divided into two separate, but complementary areas of specialization, one in housing and community development, and the other in real estate development.

HOUSING AND COMMUNITY DEVELOPMENT SPECIALIZATION

In 1949 the U.S. Congress adopted the goal of ensuring a decent home and a suitable living environment for every American family. Yet, forty years later, homelessness, dilapidated neighborhoods, and a lack of decent, affordable housing are too common. The individual and societal costs associated with these problems—including health problems, loss of productivity and human suffering— are enormous. In recent years, much has been learned about addressing the problems and a variety of new and exciting initiatives have been undertaken. The initiatives typically include federal, state and local governments, nonprofit organizations, private firms and members of the community.

The specialization trains practitioners who will work for public, nonprofit, or private organizations in efforts to increase the supply of affordable housing and revitalize urban neighborhoods. Students are trained in the theory, methods, and practice needed to accomplish this goal. Students study federal, state, and local housing and community development policies and programs; methods of analyzing housing markets and the feasibility of individual development projects; methods of analyzing neighborhood conditions and of involving community residents in revitalization efforts; and other related topics.

REAL ESTATE DEVELOPMENT SPECIALIZATION

With support of a curriculum development grant from the Urban Land Institute, the Department of City and Regional Planning and the Kenan-Flagler Business School created a program in real estate development. This specialization (1) develops excellence in the study of development projects in order to graduate students who will improve the state of feasibility analysis and real estate development practice; (2) teaches urban planners how to assess the relative costs and benefits of various types of development regulations and how to improve the regulatory process; (3) broadens students' real estate training experiences to include the public values associated with the regulation of physical development and the basis for land use

planning and controls, the public/private financing of affordable housing, and codevelopment of other projects which meet public development goals; and (4) establishs strong links with the development community in the region.

CAREER OPPORTUNITIES

Graduates of these specializations find career opportunities in private-sector development organizations, nonprofit housing and development organizations, housing finance agencies, government planning departments, and private consulting firms. Examples of jobs held by recent graduates include the following: Regina Burns (MRP 1990), facilities planner with International Business Machines, Inc., Research Triangle Park, NC; Duncan Yetmen (MRP 1990), project developer with KAN/KARP a community based nonprofit organization in Philadelphia, PA; Mark Thompson (MRP 1992), planning analyst and manager with Rylan Building Company in Columbia MD; David Cristeal (MRP 1992), planner with the community development division of the Wake County Planning Department in Wake County NC; Joanna Brownstein (MRP 1993), on the staff of the North Carolina Housing Finance Agency.

COURSE OF STUDY

All masters degree students complete the core curriculum and four additional courses in the area of specialization (12 hours). For the balance of the program (5 courses), students may choose from a variety of course offerings in city and regional planning and other departments of the University. Finally, students must complete a Masters Project to fulfill their degree requirements.

The following courses are required for master's students in Housing, Real Estate and Community Development:

Housing and Community Development Specialization

PLAN 251	Real Estate Investment and Affordable Housing (3) Spring.
PLAN 252	Housing and Public Policy (3) Fall.
PLAN 266	Community Development Planning (3) Fall.
PLAN 267	Urban Revitalization (3) Spring.

Real Estate Development Specialization

PLAN 251	Real Estate Investment and Affordable Housing (3) Spring.
BUSI 216	Real Property Decisions (3) Fall.
PLAN 242	Project and Site Planning (3) Fall.
	or
PLAN 252	Housing and Public Policy (3) Fall.
PLAN 255	The Development Process (3) Spring.

The required workshop for real estate development is:

PLAN 223A	Real Estate Market and Feasibility (3) Spring.

The recommended law courses for housing, real estate, and community development students are:

LAW 255	Housing and Community Development Law (3) Fall. or
LAW 290	Land Use Controls (3) Spring.

FACULTY—THEIR TEACHING RESPONSIBILITIES AND RESEARCH INTERESTS

EMIL E. MALIZIA
Professor, Associate Chair of the Department, and Director, Joint MRP-MBA Program; Senior Faculty Associate, Kenan Institute of Private Enterprise; and Director, Economic Development Course. BA, Rutgers; MRP, Ph. D., Cornell. Dr. Malizia teaches real estate development, real estate market research, economic development theory, and development finance. He has extensive research experience and publications in the areas of urban, rural, and regional development. He was a Fulbright scholar in Colombia. Malizia has been a consultant to private developers and nonprofit development agencies. During leaves, he has worked in federal service and as a senior adviser to a major real estate investment company.

Selected Publications:
"The Influence of Economic Diversity on Unemployment and Stability," Journal of Regional Science, Vol. 33, May, 1993.

"Economic Diversity: Insights for Developers," Economic Development Review, Vol. 11, Spring 1993.

"A Framework for Real Estate Feasibility Research," Journal of Property Valuation and Investment, Vol. 10, Spring 1992.

"Forecasting Demands for Commercial Real Estate Based on the Economic Fundamentals of U.S. Metro Markets," Journal of Real Estate Research, Vol. 6, No. 3, 1991. (1991 John Wiley prize for best article.)

"Should Home Owners Consider Lease Purchase Agreements?" (with R.E. Copley) Real Estate Review, Vol. 20, Winter 1991.

"Comparing Regional Classifications for Real Estate Portfolio Diversification," Journal of Real Estate Research, Vol. 6, Spring 1991.

Professors William Rohe and Emil Malizia.

WILLIAM M. ROHE
Professor and Coordinator of the Hubert Humphrey Fellowship Program and Director, Housing, Real Estate, and Community Development Focus Area; BA, SUNY at Buffalo; MS, MRP, Ph.D., Pennsylvania State. Dr. Rohe teaches courses in community development planning, urban policy, and neighborhood revitalization. His research interests include evaluating community development and low-income housing programs social impacts of home ownership on low-income people, and the influence of the physical environment on social behavior. His research has been funded

by the National Institute of Justice, U.S. Department of Housing and Urban Development, and the Ford Foundation. He has been a consultant to the Research Triangle Institute, a visiting scholar at the U.S. Department of Housing and Urban Development, and a member of the Chapel Hill Planning Board.

Selected Publications:

"The Impacts of Homeownership on the Social and Political Involvement of Low-Income People," (with M. Stegman) Urban Affairs Quarterly, September 1993.

"Models of Housing Adjustment and Their Implications for Planning and Policy," (with R. Quercia) Journal of Planning Literature, Vol. 8, No. 1, September 1993.

"Converting Multi-Family Public Housing to Cooperatives," (with M. Stegman) in R.A. Hayes (ed.), Ownership, Control and the Future of Housing Policy, Greenwood Press, 1993.

"Public Housing Homeownership: Will It Work and for Whom?" (with M. Stegman) Journal of the American Planning Association, Vol. 58, No. 2, Spring 1992.

"Expanding Urban Homesteading: Lessons from the Local Property Demonstration," Journal of the American Planning Association, Vol. 57, No. 4, Fall 1991.

"Using the Panel Study of Income Dynamics to Design Better Homeownership Assistance Programs," (with M. Foster, M. Stegman, and R. Quercia) Journal of Housing Research, Vol. 2, No. 1, June 1991.

"The Politics of Relocation: The Moving of the Crest Street Community" (coauthor), Journal of the American Housing Association, 56 (Winter 1991).

Professor Michael Stegman.

Planning with Neighborhoods (coauthor). Chapel Hill: The University of North Carolina Press, 1985.

MICHAEL A. STEGMAN
Professor, Department of City and Regional Planning, and Assistant Secretary for Policy Development and Research in the U.S. Department of Housing and Urban Development; BA, Brooklyn College; MCP, Ph.D., Pennsylvania. Dr. Stegman has been teaching in the area of housing and real estate investment analysis for more than 25 years. He has written extensively on the subject of affordable housing, has chaired local public housing and redevelopment authorities, served on legislative housing study commissions, and has been a consultant to state and local governments on a wide range of low-income housing issues. From 1979 to 1981 he served as Deputy Assistant Secretary for Research in the U.S. Department of Housing and Urban Development. He will be on leave from summer 1993 to summer 1995 while serving as the Assistant Secretary for Policy Development and Research at HUD.

Selected Publications:

"Issues in the Design of Locally-Sponsored Homeownership Programs," Journal of the American Planning Association, forthcoming.

"Residential Mortgage Default: A Review of the Literature," Journal of Housing Research, Vol. 3, No. 2, 1993.

"Comment on To Whom Should Limited Housing Resources Be Directed?" Housing Policy Debate, Vol. 3, Issue 1, 1992.

"Converting Multi-Family Public Housing to Cooperatives," (with W. Rohe) in R.A. Hayes (ed.), Ownership, Control and the Future of Housing Policy, Greenwood Press, 1992.

"An Alternative to Mortgage Revenue Bonds: An Evaluation of the Mortgage Credit Certificate Program in North Carolina" (with D. Stebbins), in Danny W. Durning, Editor, Mortgage Revenue Bonds: Housing Markets, Home Buyers and Public Policy, Boston, Kluwer Academic Publishers, 1992, pp. 135-160.

More Housing, More Fairly: The Limits of Privatization, New York, The Twentieth Century Fund, 1991.

"A Kinder, Gentler, Meaner, Harsher U.S. Housing Policy?" Canadian Housing Habitation Canadienne, Vol. 8, No. 4, Winter 1992, pp. 30-31.

Housing Finance and Public Policy: Case Studies and Readings. New York: Van Nostrand Reinhold Company, 1986.

Supporting Faculty

CHARLES E. DAYE
Professor of Law. AB, North Carolina Central; JD, Columbia.

DAVID R. GODSCHALK
Professor; AB, Dartmouth; B.Arch., Florida; MRP, Ph.D., The University of North Carolina at Chapel Hill. (See Land Use and Environmental Planning for biographical sketch).

DAVID J. HARTZELL
Associate Professor of Business; BS, MA, University of Delaware; Ph.D., The University of North Carolina at Chapel Hill

Land Use and Environmental Planning

Land use and environmental planning deals with the conservation and development of the physical environment. The role of planning is to balance competing demands on the land and environment brought about by expanding urban and rural development, while enhancing viable ecological resources. The challenge facing planners in this field is to guide private and public development processes to ensure an adequate supply of urban land and facilities, while respecting fiscal, environmental, and legal constraints.

During the past quarter century the field of land use and environmental planning has expanded rapidly. Permanent planning agencies are widely accepted as essential in municipal, county, and state government. In addition, planning agencies have been established and operate within the framework of metropolitan, regional, and national governmental programs. This period of increasing planning activity has broadened the scope of land use and environmental planning. In addition to design, research, and analysis, present-day planning functions include program management and implementation activities within public agencies and private organizations as well as coordination between government and the private sector. Land use and environmental planners are increasingly called upon to lead teams which set goals and define visions, to mediate conflicts, and to advise decision makers of policy and project impacts.

The primary goal of this specialization is to prepare planners for practice in local, regional, and state planning. Much of the curriculum and material learned, however, is also relevant to national, international, and private sector planning. Students develop an understanding and knowledge of land development processes, natural systems, infrastructure provision, and governmental planning and regulation. Skills obtained include preparation of land and environmental data bases, plans, policies, and implementation programs.

CAREER OPPORTUNITIES

Graduates find career opportunities in government planning departments, environmental agencies, private consulting firms, and private-sector development organizations. Examples of jobs taken by recent graduates suggest some career options in land use and environmental planning. David Blatt (MRP 1987) is a planner/lawyer with the State of Connecticut Coastal Zone Management Program; Jeanine Stevens (MRP 1992) is a Hazard Mitigation Specialist with the Federal Emergency

Management Agency; Mary Beth Binns (MRP 1990) is environmental planning coordinator, Cuyahoga River Commission in Cleveland, OH; Mark White (JD 1988-MRP 1989) is an attorney with Freilich, Leitner, Carlisle, et al. doing growth management work out of Kansas City; Suzanne Aucella (MRP 1989) works for the San Diego office of ERC Environmental/Energy Services, focusing on environmental assessments of public and private development projects in California; Julia Trevarthen (MRP 1991) is in charge of current planning for the Town of Carrboro, NC. Graduates of this area of specialization typically become directors of planning staffs and agencies by midcareer. Examples include Patricia Stevens (MRP 1979), director of environmental planning for the Atlanta (GA) Regional Commission; Sergio Rodriguez (MRP 1969), planning director of the City of Miami, FL; George Chapman (MRP 1963), planning director of the City of Raleigh, NC; and Luther Propst (JD/MRP 1985), Executive Director of The RINCON Institute, a nonprofit organization based in Tucson, AZ, which works nationwide to preserve the integrity of natural areas.

Professors David Brower and David Godschalk.

BACKGROUND AND PREPARATION OF STUDENTS

Student backgrounds cover a wide spectrum. Most students have studied social science, natural science, or design. Some have interdisciplinary majors in urban studies or environmental studies. Individuals who study in this specialization often work in planning agencies and seek advanced training in planning to further their careers.

COURSE OF STUDY

The Land Use and Environmental Planning focus area is aimed at students seeking the Master of Regional Planning degree, as well as those pursuing joint degrees in planning and law or business. Ph.D. students also take courses in this area, as do students from neighboring programs in public administration and environmental sciences and engineering at UNC-Chapel Hill, in the School of the Environment at Duke University, and landscape architecture at North Carolina State University.

All students pursuing a master's degree study the basic planning core curriculum and four or five additional courses in a selected area of specialization (see below) within the land use and environmental focus area. For the balance of the program, students are encouraged to design a course of study consistent with their interests and may choose from a variety of course offerings in city and regional planning and other departments of the University. Finally, students must submit a Masters Project at the end of their second year to complete their degree requirements.

Students in the Land Use and Environmental Planning focus area may

choose one of four specializations, each with a series of required courses. Land Use and Growth Management covers preparation and implementation of plans to guide urban development. Environmental Planning emphasizes the intersection of land use and environmental policy, with a focus on water resources. Coastal Management deals with management of land use and environmental problems unique to coastal regions. Transportation integrates courses in urban transportation and land use planning, an increasingly important area of professional practice. The required courses below are listed in the sequence in which they would normally be taken.

Land Use and Growth Management Specialization

PLAN 240 Land Use and Environmental Policy (3) Fall.
PLAN 241 Land Use and Environmental Planning (3) Spring.
PLAN 242 Project and Site Planning (3) Fall.
or
PLAN 245 Development Impact Assessment (3) Spring.
PLAN 244 Development and Environmental Management (3) Fall.

Environmental Planning Specialization

PLAN 240 Land Use and Environmental Policy (3) Fall.
or
PLAN 153 Environmental Management and Policy (3) Fall.
PLAN 234 Water Resources Planning and Policy Analysis (3) Fall.
or
PLAN 245 Development Impact Assessment (3) Spring.
PLAN 241 Land Use and Environmental Planning (3) Spring.
PLAN 244 Development and Environmental Mangement (3) Fall.

Coastal Planning Specialization

PLAN 240 Land Use and Environmental Policy (3) Fall.
MASC 138 Environmental Processes of the Coastal Zone (3) Spring.
PLAN 241 Land Use and Environmental Planning (3) Spring.
PLAN 237 Coastal Management Policy (3) Fall.
PLAN 244 Development and Environmental Management (3) Fall.

Transportation Planning Specialization

PLAN 240 Land Use and Environmental Policy (3) Fall.
PLAN 126 Urban Transportation Planning, Spring.
PLAN 241 Land Use and Environmental Planning (3) Spring.
PLAN 128 Transportation Policy and Planning, Fall.
PLAN 245 Development Impact Assessment (3) Spring.

Recommended law courses include PlAN 310(34) Planning Law; PLAN 233, Natural Resource Law and Policy; or Law 290, Land Use Control.

Further specialization in land use and environmental planning is available by electing PLAN 136/GEOG 191 (Geographic Information Systems) and PLAN 254 (Development Dispute Resolution). Further specialization in water resource planning is available by taking selected courses in the Department of Environmental Science and Engineering at UNC-Chapel Hill, as well at the Duke School of the Environment. Other electives can be taken from a wide range of courses in other areas of specialization within planning. Nearly all planning courses listed in this catalog can serve as electives for students in the land use and environmental planning area of specialization.

FACULTY—THEIR TEACHING RESPONSIBILITIES AND RESEARCH INTERESTS

DAVID R. GODSCHALK
Professor and Director, Land Use and Environmental Planning Focus Area; BA, Dartmouth; B.Arch., Florida; MRP, Ph.D., The University of North Carolina at Chapel Hill. Dr. Godschalk teaches courses on dispute resolution, site and project planning, land use and environmental planning, and professional communications. During the past thirty years he has worked as a planning teacher, researcher, consultant, and city planning director. He has served as editor of the Journal of the American Institute of Planners, vice president of the American Society of Planning Officials, member of the Board of Directors of the American Planning Association, member of the Chapel Hill Town Council, and member of the North Carolina Legislative Study Commission on Comprehensive Planning. A registered architect as well as planner, he has been an expert witness in a number of legal cases challenging comprehensive plans. His research interests include development management, hazard mitigation, geographic information systems, and coastal planning.

Selected publications:
"Implementing Coastal Zone Management: 1972-1990," Coastal Management, June 1992.

"Negotiating Intergovernmental Development Policy Conflicts," APA Journal, Summer 1992.

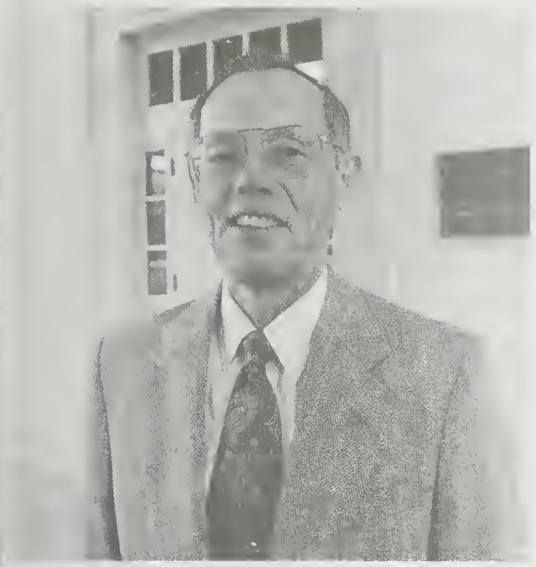
"Staffing the Revolution: GIS Education for Planners," Journal of Planning Education and Research, Summer 1992.

Catastrophic Coastal Storms: Hazard Mitigation and Development Management (with others). Durham: Duke University Press, 1989.

Understanding Growth Management: Critical Issues and a Research Agenda (co-editor). Washington, DC: Urban Land Institute, 1989.

The Planner as Dispute Resolver: Concepts and Teaching Materials (with others). Washington, DC: National Institute for Dispute Resolution, 1989.

DAVID J. BROWER
Research Professor and Associate Director, Center for Urban and Regional Studies; BA, University of Michigan; JD. University of Michigan Law School. Mr Brower teaches courses in land use and environmental planning, environmental ethics, planning law, coastal zone management and sustainable development. His research interests include growth management, coastal zone management, integrating the impacts of natural hazards, sustainable development, and environmental ethics. He has an active planning consulting practice and is admitted to practice law in several states as well as



Professor and Chair Edward Kaiser.

before the U.S. Supreme Court. He has served as an officer and on the boards of several state and national organizations including the American Planning Association and the Growth Management Institute.

Selected Publications

Coastal Zone Management: An Introduction (with T. Beatley), Island Press, forthcoming.

Evaluation of the National Coastal Zone Management Program (with others) Portland, OR: NCRI. 1991.

Catastrophic Coastal Storms: Hazard Mitigation and Development Management (with others). Durham: Duke University Press, 1989.

Understanding Growth Management: Critical Issues and a Research Agenda (co-editor). Washington, DC: Urban Land Institute, 1989.

Managing Land-Use Conflicts: Case Studies in Special Area Management (with others). Durham: Duke University Press. 1987.

EDWARD J. KAISER
Professor and Chairman of the Department; B.Arch., Illinois Institute of Technology; Ph.D., The University of North Carolina at Chapel Hill. Coauthor of Urban Land Use Planning, the leading text in comprehensive land use planning, Dr. Kaiser teaches courses in quantitative methods, land use and environmental planning, and development and environmental management. His research interests include urban development processes, innovative land use controls and planning methods, land use controls for watershed protection and other environmental quality objectives, and planning for natural hazards. He served as coeditor of the Journal of the American Planning Association (1983-1988) and as an officer of the Association of Collegiate Schools of Planning and North Carolina Chapter of the American Planning Association.

Selected publications:

Sharing Environmental Risks: How to Control Governments' Losses in Natural Disasters (with others). Westview Press. 1991.

"A Report Card on Urban Erosion and Sedimentation Control in North Carolina," Carolina Planning, 16:2, 1991.

Cities Under Water: A Comparative Evaluation of Ten Cities' Efforts to Cope with Urban Flooding Through Land Use Management (with others). Boulder: University of Colorado, 1988.

"Local Governments' Use of Water and Sewer Impact Fees and Related Policies: The State of Practice in the Southeastern United States" (with others), in Impact Fees, A. Nelson, ed., Chicago: Planners Press, 1988.

"Exactions in Managing Growth: A Land Use Planner's Perspective" (coauthor), New York Affairs, 10 (Winter 1988). Reprinted in Private Supply of Public Services, R. Alterman, ed., New York: New York University Press, 1988.

DAVID H. MOREAU
Professor and Director, The University of North Carolina Water Resources Research Institute. BS, Mississippi State; MS, North Carolina State; MS, Ph.D., Harvard. Dr. Moreau has research interests in the analysis, planning, and finance of urban water resource systems. His numerous publications include work in systems analysis, planning and finance of urban water resource systems, and land use aspects of water resources. He has chaired a local water and sewer authority, worked for the U.S. Environmental Protection Agency, held administrative positions within The University of North Carolina at Chapel Hill, and served on local, state, and federal advisory committees.

Professor David Moreau.

Selected publications:
"Evaluation of Environmental Programs: A Framework and Observations from Selected States," in J. Fittipaldi et al., eds. Environmental Program Evaluation, forthcoming.

The Clean Water Act: Past and Future, forthcoming (with Patrick L. Brezonik).

"Water Quality in North Carolina," NC Journal of Medicine, Fall 1992.

"Financing Burdens and Economic Costs in Expanding Urban Water Systems" (coauthor), Water Resources Research, 1987.

"Non-Federal Institutional Arrangements and Practices for Project Planning and Financing" (coauthor). Prepared for the Institute of Water Resources, U.S. Army Corps of Engineers. Washington: U.S. Army Corps of Engineers, February 1987.

BRIAN D. TAYLOR
Assistant Professor. BA (Geography), UCLA; MS (Civil Engineering), MCP, UC-Berkeley; Ph.D. (Urban Planning), UCLA. (See Transportation, Infrastructure, and Government Finance for biographical sketch).

SHIRLEY F. WEISS
Professor Emeritus; BA, Rutgers; MRP, The University of North Carolina at Chapel Hill; Ph.D., Duke. Dr. Weiss's teaching and research interests focus on the role of entrepreneurial decision making in shaping the urban environment, central city revitalization, and new town development. She is a member of the American Institute of Certified Planners, a Research Fellow of the Urban Land Institute, and has held leadership positions at the local, state, and national levels in the American Association of University Professors.

Supporting Faculty

RICHARD N. L. ANDREWS
Professor, Department of Environmental Sciences and Engineering. BA, Yale; MRP, Ph.D., The University of North Carolina at Chapel Hill.

WILLIAM A. CAMPBELL
Professor and Associate Director, Institute of Government. AB, Southwestern at Memphis; LL.B., Vanderbilt.

DIRK FRANKENBERG
Professor and Chairman, Curriculum in Marine Sciences. AB, Dartmouth; MS, Ph.D., Emory.

MILTON S. HEATH
Professor and Associate Director, Institute of Government. AB, Harvard; LL.B., Columbia.

J. MYRICK HOWARD
Lecturer and Executive Director, Historic Preservation Foundation of North Carolina, B.A., M.R.P., J.D., University of North Carolina

JONATHAN B. HOWES (on leave)
Secretary, State of North Carolina, Department of Health, Environment and Natural Resources. AB, Wittenberg; MRP, The University of North Carolina at Chapel Hill; MPA, Harvard.

DAVID W. OWENS
Associate Professor, Institute of Government. AB, MRP, JD, The University of North Carolina at Chapel Hill.

ALAN RIMER
Lecturer. BS, Duke; MSCE, The University of North Carolina at Chapel Hill.

WILLIAM M. ROHE
Professor; BA, State University of New York at Buffalo; MS, MRP, Ph.D., Pennsylvania State. (See Housing, Real Estate and Community Development for biographical sketch.)

STEPHEN J. WALSH
Professor, Geography. BS, Fitchburg State College; MS, Ph.D., Oregon State University.

JUDITH WEGNER
Dean and Professor of Law. BA, Wisconsin; JD, UCLA.

DALE WHITTINGTON
Associate Professor; AB, Brown; MPA, Texas; L.Sc. London School of Economics and Political Science; Ph.D., Texas. (See International Applications Areas for biographical sketch.)

Transportation, Infrastructure, and Government Finan

Transportation is one of the fastest growing fields of planning. Increasing metropolitan traffic congestion, the transportation planning requirements of the Clean Air and Americans with Disabilities Acts, and increased funding for planning in the Intermodal Surface Transportation and Efficiency Act have combined to increase the demand for transportation planners. Similarly, water and sewer systems and solid waste collection, treatment, and disposal together account for the second largest item in most municipal budgets (behind education), and require a considerable amount of attention by planners. Infrastructure facilities, and collection and treatment procedures, are important for the proper disposal of toxic and nontoxic materials, which have environmental, as well as economic consequences. In addition, the location of infrastructure facilities profoundly affects the pattern and nature of urban development. Capital expenditures and the availability of public services also have important economic development effects. Those likely consequences have been recognized by the Clinton Administration, which has proposed a national infrastructure policy.

A critical dimension of transportation and other types of infrastructure services is their financing. Planners are responsible for designing equitable and efficient means to build and operate transportation systems and other infrastructure services. For that reason, planners must understand local tax systems, bond instruments, the economics of user fees, leasing arrangements, and other types of government finance.

The goal of the Transportation, Infrastructure, and Government Finance Focus Area is to prepare men and women for careers as planners, managers and analysts, by supplementing general planning knowledge with concepts and methods from economics, political science, engineering and operations research, and public policy. For example, economics provides analytic tools for setting prices, charges, and fares appropriately, and for assessing the welfare implications of various policy choices. An understanding of politics is important to judge the feasibility of plans and policies, and to implement them effectively. Engineering and operations research play a role in all infrastructure sectors: from the sizing of pipes and highways, to the analysis of flows, of water and sewage, as well as commuters and information. The public policy perspective is helpful for choosing among alternative policies, by establishing and using appropriate criteria.

The specializations within Transportation, Infrastructure, and Government Finance are designed to provide overall familiarity with the field and specific expertise in the areas of transportation planning, infrastructure finance, or water resources planning. Students focusing on transportation planning study highways, public transit, parking, and air quality issues. They can supplement DCRP courses with transportation engineering offerings at North Carolina State and Duke Universities. Students in the infrastructure finance specialization take additional economic and public management courses, the la

ter in the University's Masters in Public Administration Program. Students specializing in water resources planning can supplement their DCRP course work with offerings in the University's Department of Environmental Sciences and Engineering. These specializations can be combined with others in Land Use and Environmental Planning; Economic Development; or Housing, Real Estate and Community Development. Students can elect to supplement their course of study with classes focusing on planning in developing countries, including taking a minor in that area.

CAREER OPPORTUNITIES

Upon successful completion of this specialization, students can find jobs at the local, regional, state, and federal levels of government, with transportation planning agencies, highway departments, public transit operators, public works departments, budget/finance departments, and publicly owned utilities. There are also opportunities in the private sector, in consulting firms and many businesses.

Jobs held by alumni suggest some of the career options for graduates: Phillip Matson (MRP 1990) started his career as a transportation planner for the North Carolina Department of Transportation; Lynne Hollyer (MRP 1984) is a resource analyst for Pacific Gas & Electric Co. in San Francisco; Mary Hough (MRP 1982) is the Transit Administrator, and John Gardner (MRP 1988) is the Transit Planner, both for the Durham (North Carolina) Area Transit Authority; Catherine Morris (MRP 1980) is assistant director of the electric power division for the Boston Public Works Department; Judith Barnet (MRP 1989) is a transportation planner with Montgomery County, Pennsylvania; Laurie Zeitlin (MRP 1985) works as a senior planner for a transportation consulting firm in Washington, D.C.; Mary Peloquin (MRP 1987) is a financial analyst with Standard and Poors in New York; and Stephanie Jones' (MRP 1993) first job after Carolina was as a USAID consultant to local government in Bulgaria.

BACKGROUND AND PREPARATION OF STUDENTS

Students enter this area of specialization with a wide variety of undergraduate training. Recent students have held undergraduate degrees in economics, engineering, environmental studies, political science, and urban studies, and other natural and social sciences, all of which are appropriate for this specialization.

COURSE OF STUDY

All students pursuing a master's degree must complete the basic planning core curriculum and four or five additional courses in their area of specialization. For the balance of the program (4 to 5 courses), students are encouraged to design a course of study consistent with their own interests and may choose from a variety of course offerings in city and regional planning, in other departments at the University of North Carolina, or at neighboring institutions. Finally, students must submit a Masters Project at the end of their second year to complete their degree requirements.

All students in this focus area take a survey course in urban services and infrastructure (PLAN 125) and public economics (PLAN 225) in which they learn principles of cost-benefit analysis and rationales for the public provision of goods and services, and for regulation.

Librarians Linda Drake and Betty Geer.

All students also are required to participate in a problem-oriented workshop (PLAN 222 or 223) that often cuts across specializations, for a specific public sector client (including public utilities). Students then take two courses in one of three areas of specialization—transportation planning, infrastructure finance, or water resources.

The required courses in the specializations are as follows:

Transportation Planning

PLAN 125	Urban Services and Infrastructure (3) Fall
PLAN 225	Public Economics (3) Spring
PLAN 126	Urban Transportation Planning (3) Spring
PLAN 128	Transportation Policy and Planning (3) Fall

Plus one additional transportation-related course selected in consultation with advisor. Acceptable courses include:

PLAN 127	Public Transportation (3) Spring
PLAN 129	Transportation Planning Models (3) Fall
CE 217	Transportation Systems Analysis, Duke University
CE 501	Transportation Systems Analysis, N.C. State University
CE 502	Transportation Operations, North Carolina State University
CE 589D	Public Transportation Systems, N.C. State University

Infrastructure Finance

PLAN 125	Urban Services and Infrastructure (3) Fall
PLAN 225	Public Economics (3) Spring
PLAN 226	State and Local Public Finance (3) Fall.

POLI 214 Public Budgeting and Management (3) Fall

Water Resources Planning

PLAN 125 Urban Services and Infrastructure (3) Fall
PLAN 225 Public Economics (3) Spring
PLAN 234 Water Resources Planning and Policy Analysis (3) Fall

Plus one additional water resource-related course selected in consultation with the faculty advisor.

Recommended law courses include:

LAW 257 Local Government Law (3) Fall
PLAN 233 Natural Resource Law and Policy (3) Fall

FACULTY: TEACHING RESPONSIBILITIES AND RESEARCH INTERESTS

GLENN CASSIDY
Assistant Professor. S.B., Massachusetts Institute of Technology; MPA, Texas; Ph.D., Carnegie Mellon University. Dr. Cassidy applies economic analysis to policy issues relevant to state and local governments. His interests lie in public finance, political economy, infrastructure, and regulation. His current research includes a cost-benefit study of busways and tramways, and studies concerning the impact of public choice institutions on local government policy outcomes. Prof. Cassidy teaches PLAN 225 and 226.

Selected Publications:
Redistribution by Local Governments in Monocentric Urban Area" (coauthor), Regional Science and Urban Economics 1989).

"An Empirical Examination of Bias in Revenue Forecasts by State Governments" (coauthor), International Journal of Forecasting (1989).

MICHAEL I. LUGER
Professor and Director, Transportation, Infrastructure, and Government Finance Focus Area; Chairman, Public Policy Analysis Curriculum. A.B., MPA, Princeton; M.C.P., Ph.D. (Economics), UC-Berkeley. Dr. Luger is an urban and regional economist and planner with interests in economic development, infrastructure, housing, and public finance. He has served on transportation task forces for the City of Durham and the Triangle region and as a consultant to the Urban Institute, U.S. Department of Transportation, and The World Bank on transportation and infrastructure issues. He currently serves as chairman of the Board of Trustees of the Durham Area Transit Authority.

Selected publications:
"Theory and Practice in High Tech Economic Development" (coauthor), in R. Bingham, et al. editors, Economic Development in the United States: A Theoretical Perspective (1993).

"Technology Development Programs, Intergovernmental Relations and Balanced Regional Growth," in Anita A. Summers and Lenfranco Sen, editors, Comparisons of Urban Economic Development in the U.S. and Western Europe (1993).

"Determinants of Transit System Contracting in the U.S." (coauthor), in George Guess, editor, Public Policy and Transit System Management (1990).

Professor Michael Luger.

Assistant Professor Brian Taylor.

"The Economic Value of the Coastal Zone," Journal of Environmental Systems (1994).

"Geographic Differences in Production Technology" (coauthor), Regional Science and Urban Economics (1988).

"Costs and Benefits of Urban Erosion and Sediment Control: The North Carolina Experience" (coauthor), Journal of Environmental Management (1993).

Technology in the Garden: Research Parks and Regional Economic Development (coauthor) (1991).

"State Subsidies for Industrial Development: Program Mix and Policy Effectiveness," in J. M. Quigley, editor, Perspectives on Local Public Finance and Public Policy, Vol. 3 (1987).

"Federal Labor Protection and the Privatization of Public Transit (coauthor)," Journal of Policy Analysis and Management (1988).

DAVID H. MOREAU
Professor and Director, The University o North Carolina Water Resources Research Institute. B.S., Mississippi State; M.S., North Carolina State; M.S., Ph.D., Harvard. Prof. Moreau teaches PLAN 234. (See Land Use and Environmental Planning for more complete biographical sketch.)

BRIAN D. TAYLOR
Assistant Professor. B.A. (Geography), UCLA; M.S. (Civil Engineering), M.C.P., UC-Berkeley; Ph.D. (Urban Planning), UCLA. Dr. Taylor has severa years' experience as a regional planner and transportation analyst. He teaches courses in transportation policy and planning, and urban spatial structure. His research interests are in the changing racial/ethnic, gender, and modal patterns of commuting, and in the politics of transportation planning and finance. Prof. Taylor teaches PLAN 126, PLAN 127, and PLAN 128.

Selected Publications:

"The Changing Commute: A Case Study of the Jobs/Housing Balance Over Time" (coauthor), Urban Studies (1993)

"Unjust Equity: An Examination of California's Transportation Developmen Act," Transportation Research Record (1991).

"Mission and Mix: A Study of the Changing Staffing Requirements of the California Department of Transportation" (coauthor, 1987).

International Applications

Students have rich opportunities for extending their study of planning and development beyond the United States and to other countries and international theaters. The opportunities are organized into two principal geographic contexts within the department—planning in developing areas, and planning in industrialized countries. Planning in developing areas focuses on so-called third world countries around the globe, and underdeveloped areas within developed countries. Planning in industrialized countries focuses on Western Europe as well as central and eastern European countries undergoing privatization and democratization.

PLANNING IN DEVELOPING AREAS

The economic and human problems faced today by people in developing countries pose one of the central global challenges of the twentieth century. In spite of several decades of experience, the results of international assistance are mixed and subject to different ideological interpretations. Policy makers and students of development draw different conclusions from the many failures and few successes of development projects.

The faculty of the Department of City and Regional Planning believe that highly trained city and regional planners are required to tackle the interdependent problems of developing countries—rapid urbanization, environmental degradation, famine, poor public health conditions, inadequate water supply and sanitation, economic stagnation, and external dependency.

DCRP faculty bring a wealth of experience to the classroom. Faculty work with international development agencies, nongovernment institutions and various government and nonprofit institutions such as national ministries of planning, health and local government, national housing authorities, public works departments, and women and development agencies. Faculty have worked and continue to work in Egypt, Haiti, Nigeria, Liberia, Tanzania, Botswana, Ghana, Jamaica, Bangladesh, India, and the Philippines.

CAREER OPPORTUNITIES

Faculty are in contact with more than 40 development agencies to assist students in obtaining summer internships and permanent positions. Faculty work with students to prepare a student resume booklet that is sent to development agencies. Students have received The Tinker Summer Fellowship award for travel to Latin American countries, the World Bank Summer internship, the Inter-American Bank internship, and internships with the department of State and the Research Triangle Institute. Students also have worked for Habitat for Humanity in Kenya and Zaire as summer interns. DCRP alumni work for private firms and governments in developing countries and also serve as contacts for students in search of internships and employment.

COURSE OF STUDY FOR A MINOR IN "PLANNING IN DEVELOPING AREAS"

The Department of City and Regional Planning has designed a minor in planning in developing areas that is open to MRP students. Courses in the developing areas minor engage students in discussions of the complex spatial, economic, financial, and political problems facing developing countries and the theoretical perspectives that have been developed to understand their causes. Policy

areas that receive special emphasis in the program are population and development policy, economic development, environmental and resource management, women and development, housing, financial management, and poverty.

Three courses, in addition to the core curriculum and the required courses in the selected area of specialization, are required for the minor:

PLAN 124	Urbanization and Planning in the Third World (3) Fall
PLAN 232	Public Investment Theory and Techniques (3) Spring
PLAN 264	Regional Development Theory (3) Fall

Additional elective courses within the department include:

PLAN 275	Population and Housing Policies in the Third World (3) Fall
PLAN 310(48)	Cross-Cultural perspectives: Poverty/Informality (3) Spring
PLAN 142	Gender Issues in the Development Process (3) Fall

Students can also take elective courses in other UNC-Chapel Hill departments, at Duke University, and at North Carolina State University. The Department of City and Regional Planning collaborates with other departments on campus, international programs at Duke University and North Carolina State University, and private firms and nonprofit organizations to maximize the students' learning experiences. UNC-Chapel Hill research centers that offer research assistantships and learning experience include:

- The Institute of Latin American Studies
- The Water Resources Research Institute
- The Institute for Environmental Studies
- The Center for Urban and Regional Studies
- The Carolina Population Center

For further information about the study opportunities in planning for developing areas, contact Professor Linda Lacey.

OPPORTUNITIES FOR PLANNING IN INDUSTRIALIZED EUROPEAN COUNTRIES

For students interested in industrialized and European countries, including those undergoing privatization and democratization, there are many opportunities. Recent seminars and courses offered by DCRP faculty have examined the comparative development practices in other industrialized countries. Other pertinent courses are available in UNC-Chapel Hill's departments of political science, sociology, and economics. The Program for European Studies and Center for Slavic, Eurasian, and East European Studies offer opportunities for research, education, and contacts in designing programs of study in 20 European universities. All exchange programs are administered by the UNC-Chapel Hill Study Abroad Office. Students interested in any of the programs should inquire early and apply for available financial assistance in their first year of residence.

The Department of City and Regional Planning's faculty have developed special working relationships with development economists, environmental experts, and planners at two academic

Associate Professor Dale Whittington and Professor Linda Lacey.

programs offered by the Vienna University of Economics and Business Administration (WUW). Students interested in regional economic development, urban and rural development, and planning in developing countries may be interested in spending a semester at the Interdisciplinary Institute for Urban and Regional Studies (IIR). The Central European Regional Research Organization established jointly by DCRP and IIR faculty is centered in Vienna and offers excellent contacts with development experts and students interested in this important region.

Similar opportunities are available at WUW for students interested in environmental economics and planning throughout Europe. The WUW also hosts the European Regional Observatory, a long-range research project dedicated to investigating the diffusion and adoption of technologies by cities throughout Eastern Europe. The well-established student exchange semester in Vienna provides an unrivaled opportunity for students to undertake a program of supervised study in the heart of Europe's developed regions, both East and West. Those who also wish to take summer semester coursework in comparative economic development may enroll in classes taught by DCRP or affiliated faculty at the Vienna University of Economics through the UNC-Chapel Hill Summer School and Office of International Programs.

European internship opportunities are now available in London, Bonn, Madrid, Paris and Brussels through the auspices of Education Programs Abroad, in conjunction with UNC's Study Abroad Office. These internships place students in family accommodations and unpaid positions working with important national, regional or city officials. They are available during the academic year or summer, and may include course credit opportunities.

For further information, write to Professor Edward Bergman.

FACULTY—THEIR TEACHING RESPONSIBILITIES AND RESEARCH INTERESTS

LINDA LACEY
Professor; B.A. University of California at Berkeley; MRP and Ph.D., Cornell University. Dr. Lacey teaches urbanization and planning in the Third World, Population and Housing Policies in the Third World and the planning applications workshop. Since 1974 she has played leading roles in development projects funded by the United States Agency for International Development in the areas of rural development, urbanization and population planning. She has worked on projects for the governments of Bangladesh, Jamaica, Tanzania, Sierra Leone, Nigeria, Liberia, and Botswana, Phillippines, Uganda, and Ghana. Her areas of research include housing policies in developing countries, women in the development process, West African urbanization, and the population policy process.

Assistant Professor Helzi Noponen.

Selected Publications:

"Population Projections for Planners" in Comprehensive Land Use Planning: Strategies for the 90s, ed. Jon Witten, Lewis Publishers, Inc. 1993.

Decentralization of Population Programs in sub-Saharan Africa: Concepts and Issues, OPTIONS II, Office of Population, Agency for International Development, May 1993.

"Shelter and Related Needs of Female Headed Households in Slum and Squatter Settlements in Liberia" Housing, Squatter Settlements and the Informal Sector, vol. 27, Traditional Dwellings and Settlements Working Paper Series. Center for Environmental Design and Research, University of California, Berkeley, 1991.

"The New Generation of African Population Policies" in Population Policy: Contemporary Issues, ed. Godfrey Roberts, Praeger Press, pp. 135-146, 1990.

"Population Policy Implementation in Sub-Saharan Africa: The Role of Housing Providers and Urban Planners" Contemporary Issues in African Administration and Development Politics edited by M. Mtewa, Delhi: Allied Publishers, pp. 200-219, 1990.

"Low-Income Settlements in Monrovia, Liberia" in Spontaneous Shelter: International Perspectives and Prospects, edited by Carl V. Patton, (with S. Owusu), Temple University Press, pp. 214-234, 1988.

"Squatter Settlements in Liberia: Towards the Integration of Housing and Population Policies." African Urban Quarterly, Vol. 3/4, no. 4, pp. 219-230, 1988.

"Population - A Key Component of Planning Education for Developing Countries" Carolina Planning, Vol. 14, No. 1, pp. 30-39, Spring 1988.

EDWARD BERGMAN

Professor; Director, Economic and Community Development Focus Area; and Director, Institute for Economic Development; B.S., Michigan State; M.C.P., Ph.D., Pennsylvania. (See Economic Development for biographical sketch.)

HELZI NOPONEN

Assistant Professor; B.A., Temple; M.C.I Ph.D., California. Dr. Noponen has bee a Fulbright scholar in India, where she conducted research on the urban inform sector, subsidized lending programs for the working poor, and grassroots women development organizations. Her research and teaching interests include issues of poverty, employment, and inequality in developing areas, the role of women in the development process, and urbanization and development in the Asia-Pacific region. She has conducted research on trade-related shifts in the economic base of American cities, the performance of U.S. industries in the global market, and state and local development strategies in the era of increasing international trade.

Selected publications:

Trading Industries, Trading Regions: International Trade, American Industry and Regional Economic Development (ed., with Julie Graham and Ann Markusen), Guilford Press, New York, NY, 1993.

"Scale and Regulation Shapes an Innovative Sector: Jockeying for Positio in the World Pharmaceutical Industry," i Trading Industries, Trading Regions: International Trade, American Industry

and Regional Economic Development (ed., with Julie Graham and Ann Markusen), Guilford Press, New York, NY, 1993.

"Loans to the Working Poor: A Longitudinal Study of Credit, Gender and the Household Economy," in International Journal of Urban and Regional Research, Vol. 16, No. 2, 1992.

"International Trade, Productivity and Regional Job Growth: A Shift Share Interpretation," Center for Urban Affairs, International Regional Science Review, Vol. 14, No. 1, 1991.

"Organizing Women Petty Traders and Home-based Producers," in Invisible Hands: Women in Home-Based Production, Andrea Menefee Singh and Anita Kelles-Viitanen, eds. Delhi: Sage Publications, 1987.

DALE WHITTINGTON
Associate Professor of Planning and Associate Professor of Environmental Sciences and Engineering; A.B., Brown; MPA, Texas; L.Sc. London School of Economics and Political Science; Ph.D., Texas. Dr. Whittington teaches public investment theory and techniques, water resources policy and planning in developing countries, and survey research in developing countries. He has worked on water resources policy and planning issues for the National Commission on Water Quality, Ford Foundation, Egyptian Academy of Scientific Research and Technology, International Institute for Applied Systems Analysis, and the World Bank. In 1983 he was a Fulbright Senior Scholar at the Institute of Environmental Studies, University of Khartoum. In 1984 he was a visiting lecturer at the Politecnico di Milano, Italy. In 1985 he was a Technical Adviser to the Ministry of Finance and Economic Planning, Government of Sudan, on the microcomputer use for development planning, budgeting, and management. His research interests include the development of methodologies for evaluation of water and sanitation projects in developing countries.

Selected publications:
"Rent-Seeking in the Water Supply Sector: A Case Study of Jakarta, Indonesia," (with Laszlo Lovei) Water Resources Research, 1993.

"Household Sanitation in Kumasi, Ghana: A Contingent Valuation Study," (with D.T. Lauria, A.M. Wright, K. Choe, J.A. Hughes, and V. Swarna) Water Resources Research, 1993.

"Rethinking Rural Water Supply Policy in the Punjab, Pakistan," (with A. Altaf, V.K. Smith and H. Jamal) Water Resources Research, 1993.

"Opportunities for Regional and International Cooperation in the Nile Basin," (with Elizabeth McClelland) Country Experiences with Water Resources Management; Economic, Institutional, Technological and Environmental Issues, ed. by Guy Le Moigne, Shawki Barghouti, Gershon Feder, Lisa Garbus, and Mei Xiee. World Bank Technical Paper Number 175, Washington, DC, 1992.

"A Study of Water Vending and Willingness to Pay for Water in Onitsha, Nigeria," (with D.T. Lauria and X. Mu) World Development, Vol. 19, No. 2/3, 1991.

SUPPORTING FACULTY

RICHARD E. BILSBORROW
Research Professor of Biostatistics; B.A., Carleton; M.A., Ph.D., Michigan.

DENNIS RONDINELLI
Director, International Development Research Center, Kenan-Flagler Business School. B.A., Political Science; Ph.D., Cornell.

COMBINED PROGRAM IN LAW AND PLANNING

Under a combined program sponsored by the School of Law and the Department of City and Regional Planning, students may pursue the J.D. and Master of Regional Planning degrees together. Taken jointly, the two degrees may be obtained in four years rather than the five years ordinarily required. The combined program seeks to develop professionals capable of dealing with both the legal and planning aspects of urban and regional development and policy. Coursework is designed to prepare students for a variety of professional roles in which a knowledge of planning methodology and process, coupled with the analytical skills and professional expertise of the lawyer, are essential. These include administrators and staff of public agencies and consulting firms in the fields of planning, housing, development, and environmental protection, and members of private law firms and public legal staffs.

To enter this program, students must apply separately to the School of Law and the Department of City and Regional Planning and must be accepted ndependently by both. Students enter- ng the program spend their entire first ear in either the Planning Department r the School of Law, and the student nust make this choice at the time of dmission. The second year is normally pent full-time in the program not select- d in the first year. After the first two ears the student has an additional 43 emester credits to complete in the chool of Law and 12 semester credits to omplete in Planning.

A viewbook and application for dmission to the School of Law may be btained from:

The University of North
Carolina at Chapel Hill
Admissions Office
School of Law
Campus Box# 3380
Chapel Hill, NC 27599-3380

Further information may be obtained from the program advisers: Professor David R. Godschalk, Department of City and Regional Planning, and Dean Judith Wegner, School of Law.

COMBINED PROGRAM IN BUSINESS AND PLANNING

Urban development is increasingly a joint public-private enterprise in which planning (deciding what to do) and management (deciding how to do it) are interrelated activities. Private actors must understand the public considerations that underlie the regulatory environment in which they operate to achieve their goals. Public actors must understand the market economy and the ways in which government regulations affect production, prices, and distribution processes to achieve public goals. Increasingly, applicants to both the planning and business programs want to pursue career paths in urban development and related fields that combine planning and management and seek the flexibility to move between jobs in the public and private sectors. The combined degree program requires a total of 85 credit hours, of which 27 hours are credited jointly toward the MRP degree, which requires 48 credit hours, and the MBA degree, which requires 64 credit hours.

To enter this program, students must apply separately to both the Department of City and Regional Planning and the Kenan-Flagler Business School and must be accepted independently by both. Students entering the

program spend their entire first year in either the Planning Department or the Business School and the student must choose at the time of admission. The second year is spent full-time in the program not selected in the first year. In the third year, students take courses in both business and planning. Sufficient electives can be taken in planning and business so that a curriculum can be tailored to each student's career objectives.

A catalog and application for admission to the Kenan-Flagler Business School may be obtained from:

Director of MBA Admissions
The Kenan-Flagler Business School
Campus Box 3490, Carroll Hall
The University of North
Carolina at Chapel Hill
Chapel Hill, NC 27599-3490

Admission to the Business School is based on demonstrated potential for responsible leadership, the quality of the student's academic transcripts, and the applicant's score on the Graduate Management Admission Test (GMAT) administered by the Educational Testing Service of Princeton, NJ.

Further information about the business and planning program may be obtained from the program advisers: Professor Emil E. Malizia, Department o City and Regional Planning, and Willian J. Bigoness, Kenan-Flagler Business School.

DUAL DEGREE IN PUBLIC ADMINISTRATION AND PLANNING

Planners often gravitate to governmental management positions in local and state government, and benefit from knowledg of budgeting, personnel, and governmen administration and politics. City and county managers must grapple with plan ning issues, which constitute a large portion of local government agendas. To pre pare people who want the flexibility of moving between planning and management positions in government, the Planning Department and the Public Administration program in the Department of Political Science collaborate in a program whereby students can receive both the MRP and the MPA degrees in three years, plus a summer pr

fessional field experience in public administration.

The intent of the dual degree is to ensure that recipients have two complete and complementary, but distinct, areas of training. The MPA requirements ensure adequate training in public management. The MRP requirements ensure adequate training in core planning knowledge and skills, and in an area of planning specialization, such as land use and environmental planning, economic development, housing, real estate and community development, transportation, planning, infrastructure, and finance.

Students must obtain admission to both the MPA and MRP programs independently. With prior approval from faculty advisers in both programs, students may count certain courses toward both degrees. The dual degree program requires a total of 75 semester credit hours, of which 15 of the 54 semester hours required for the MPA may be counted from the MRP curriculum, and 12 of the 48 semester hours required for the MRP may be counted from the MPA curriculum. Students are advised to gain approval from faculty advisers for their specific program of courses during the first semester of residence to assure that they can meet all requirements of both programs within the three years.

Information about the Master of Public Administration Program may be obtained from Professor Michael Munger, Director, Master of Public Administration Program, 319 Hamilton Hall, CB#3265, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3265. Further information about the dual degree program may also be obtained from Professor Michael Luger, Department of City and Regional Planning.

PH.D. IN PUBLIC POLICY ANALYSIS

Doctoral students and advanced masters students in planning may also benefit from the presence of a Ph.D. program in public policy analysis. In particular, the program offers advanced coursework appropriate for planning students, in economic analysis for policy and planning, political institutions and policy actors, ethics and formal decision analysis, and research methods. Several planning faculty members teach in the Curriculum in Public Policy Analysis, which also draws on intellectual resources from UNC-Chapel Hill academic departments, including the departments of Economics, Political Science, Sociology, Health Policy and Administration, Environmental Sciences and Engineering, and the schools of Medicine, Law, Social Work, Business, and Education.

Further information about graduate programs in public policy analysis may be obtained from: Curriculum in Public Policy Analysis, CB #3435, Abernethy Hall, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3435.

The Doctoral Program in City and Regional Planning

The doctoral program in planning provides training in urban and regional research that enables graduates to contribute to the development of substantive theory, knowledge, and scholarship in planning, to formulate and evaluate innovative public policy, and administer research programs in domestic and international contexts. The program is relatively small but highly selective and individualized. It is ideal for mature students from a variety of backgrounds. Most doctoral students have previous graduate work in planning or a related field.

CAREER OPPORTUNITIES

Graduates of the program find many career opportunities open for them. Of the 75 or so men and women who have earned Ph.D.s in the program since its inception in 1961, about sixty percent teach and do research in universities. The others are engaged in challenging careers in domestic or international agencies or in private consulting and research firms. Twenty percent work outside of the United States or are engaged in multinational projects. Our Ph.D. graduates include departmental chairpersons, deans, and officers of national academic and professional organizations, and many well published scholars.

BACKGROUND AND PREPARATION OF STUDENTS

The Ph.D. student body is a diverse group of highly motivated and creative men and women from a variety of backgrounds and origins. Each year between six and eight students begin the Ph.D. program. There are generally about 25-30 Ph.D. students in residence at any given time. They come to Chapel Hill from all over the world, including all regions of the United States. About two-thirds already have master's degrees in planning or related fields. A list of current students in residence, their place of origin, undergraduate and graduate degrees, and areas of research interest illustrates the range of backgrounds and interests students bring to the Ph.D. program.

Vickie Basolo, California. BA (Geography), UCLA; MURP (Urban and Regional Planning) Cal State/Pomona. Housing and neighborhood policy.

JoAnn Carmin, New York. BS, (Hotel administration), and M.S. (Organizational Managcment) Cornell. Management and behavior of development planning organizations.

KyeongAe Choe, South Korea. Bachelor of Engineering, Yonsei University; MURP (Planning), University of Wisconsin, Madison. Water resources planning in developing countries.

Sherry Emery, Washington, D.C. BA (Economics), Johns Hopkins; MBA (International Economics), Columbia University. Economic developmcnt and telecommunications policy.

Ed Feser, California. BA (Government), University of San Francisco. Economic development.

Lance Freeman, New York. BS (Business), SUNY/Buffalo; MRP (City and Regional Planning), UNC-Chapel Hill. Community development and revitalization.

Rachel Garshick, Massachusetts. BA (History), Brandcis; MA (Urban and environmental policy), Tufts. Housing and community development policy.

Tom Gaunt, North Carolina. BA (Philosophy), St. Louis University; Master of Divinity (Theology) Loyola University/Chicago; MPA (Public Administration), UNC-Chapel Hill. Community development.

Bill Henderson, Georgia. BA, MCRP (Planning), Ohio State University. Land use and environmental planning, sustainable development.

Robin Howarth, California. BA (Biology), Stanford; MA (Food Research), Stanford. Financing urban development.

Herman Huang, Ohio. BS, Case Western Reserve; MS (Environmental Sciences), Indiana University, Bloomington. Transportation and urban development.

Aly Karam, Egypt. BS, Alexandria University; MS (Architecture), University of Kansas. Housing and settlements in developing countries.

Elizabeth McClelland, Massachusetts. BA (Economic/Environmental management), Tufts University. Water resources planning.

Laura Murphy, North Carolina. BS (Mechanical Engineering), Stanford. Sustainable development.

Wei Qin, Peoples Republic of China. BA, MS (Environmental Sciences), Beijing Normal University. Geographic information systems.

Sanath Ranawana, Sri Lanka. BS (Environmental studies), SUNY/Syracuse; MPA (Public Policy), University of Texas/Austin. Water resources planning.

Fatih Rifki, North Carolina. Bachelor of Architecture, American University of Beirut; Masters of Architecture, University of Oregon. Sustainable communities.

Dale Roenigk, Kansas. BA (Public Policy), Duke University. Land use and environmental planning.

Irit Sinai, Israel. BA, Everyman's University; MA (Public Policy), Tel-Aviv University. Planning in Developing Areas.

Daoshan Sun, Peoples Republic of China. BS (Planning), Nanjing University. Regional economic development.

Stuart Sweeney, California. BA (Urban Studies/Planning), University of California/San Diego. Urban and regiona labor market dynamics.

Ken Temkin, New York. BS (Economics/Accounting), New York University; MBA (Economics), Baruch College. Neighborhood dynamics.

Laura Temple-Haney, North Carolina. B Warren Wilson College; MPA (Public Administration), Harvard University. Rural economic development.

Meera Viswanathan, India. Bachelors (Geography), Delhi University; Master's (Geography), Nehru University. Micro-enterprise development.

Jeanne Yang, Virginia. BA (Math/Environmental design), University of Pennsylvania; MCP (City Planning), Georgia Tech. Geographic information sys tems.

Mei Zhou, Peoples Republic of China. BS Beijing Normal University; MA (Urban Studies), University of Maryland, College Park. Urban economic development.

COURSE OF STUDY

Each student develops an individualized course of study to reflect a specific area of interest and career aspirations. Areas of specialization and appropriate course work are determined jointly by the students and their program advisers. We make a strong effort to develop prograr which meet students' needs and build o their prior academic training and for which substantial departmental or university faculty resources are available. While the substantive focus of areas of

specialization vary from student to student, each set of courses designated as an area of specialization must be mutually reinforcing and coherent; must prepare the student for expertise in some body of knowledge, methodology, or problem area; and must provide the student with the methods and knowledge bases to do scholarly research. The comprehensive exams, taken at the end of course work, require a knowledge of planning theory, and research methods, in addition to the student's specific area of specialization.

The Ph.D. degree requires a minimum of 30 credits. Students may take courses in any department of the University, Duke University, North Carolina State University, or North Carolina Central University, all of which are convenient to Chapel Hill. We accept graduate transfer credits, but require at least one year of residency for course work. The department does not require a foreign language. We strongly encourage both research and teaching experience during residency.

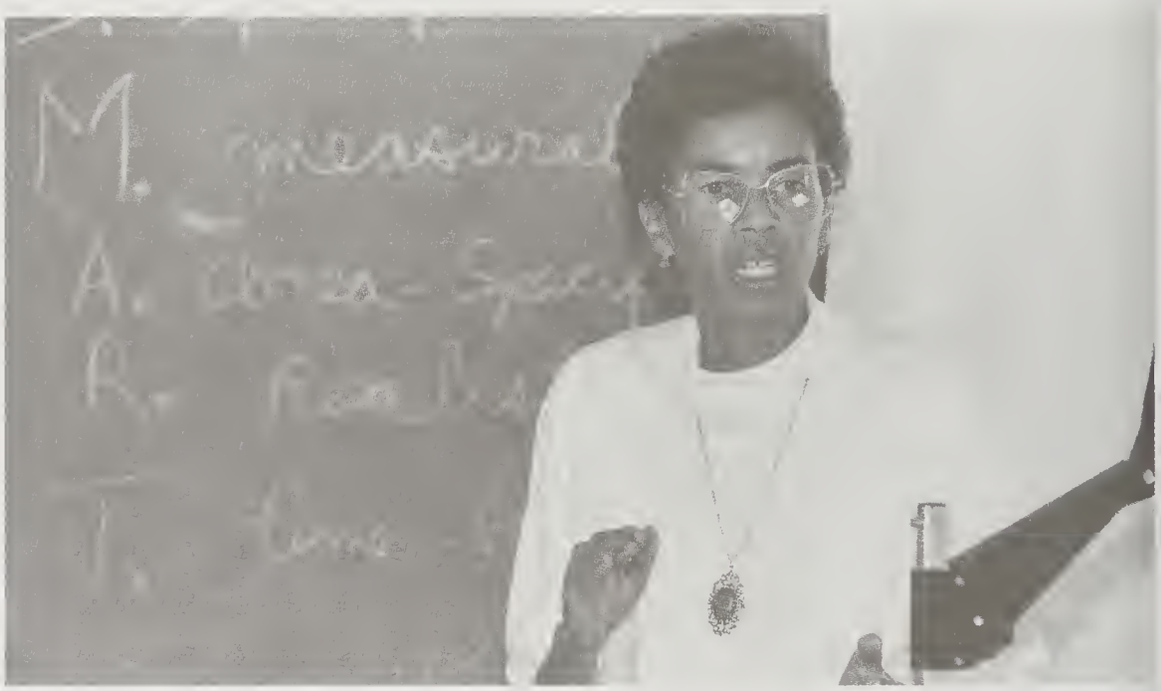
Adequately prepared students with master's degrees in planning or related fields generally need between two and four semesters of formal course work leading to comprehensive exams. Dissertation research takes approximately one more year. Students without master's degrees may have to take additional coursework; many such students obtain a master's degree in planning in addition to the Ph.D., although that is not necessary.

The doctoral program is based upon a mentoring model. Each admitted student is paired with a faculty mentor. The faculty mentor advises the newly entered doctoral student on taking the appropriate courses, and provides opportunities for, and supervision in the practical aspects of conducting state-of-the-art research. This closely supervised research experience is an integral part of the doctoral training, and is usually conducted within the auspices of the faculty mentor's sponsored research grants. Throughout the doctoral student's residency in the program, the faculty mentor provides feedback on progress, practical advice, and professional contacts to help each doctoral student prepare for a successful career in research and scholarship.

THE DOCTORAL FACULTY

In combination with the quality of its students and graduates, the best measure of a Ph.D. program is the quality of the faculty and their expertise in students' areas of interest. The department's faculty members form an exceptionally well qualified, energetic, and committed group of scholars. All are active in research and many are nationally acknowledged as leaders in their fields. They often serve as policy advisers to legislative and executive bodies at all levels of government. Yet, they are accessible and enjoy the one-on-one relationships necessary for sound doctoral-level training. The faculty regularly has more than

Bertina Baldwin, Becky Crane, Carolyn Turner, Marie Lee.



Linda Lacey researches planning in the Third World.

$1,000,000 annually in on-going research projects. These funds provide financial aid and supporting research experience and dissertation opportunities in a wide variety of areas.

The members of the Department's graduate faculty and their areas of research include the following:

***Richard N. L. Andrews**—scientific and value judgments in environmental policy analysis; solid and hazardous waste management.*

***Edward M. Bergman**—regional economic development in the U.S. and Europe; urban and rural development dynamics; industrial policy and restructuring; labor markets and human resources.*

***Glenn Cassidy**—local government finance; infrastructure provision and finance; public choice institutions of local governments; political economy of regulation.*

***David R. Godschalk**—dispute resolution; geographic information systems; growth management; hazard mitigation; coastal management.*

***Harvey A. Goldstein**—science and technology as a force in economic development; state and local industrial policies; regional economic forecasting methods; economic impact assessment; planning theory; location theory.*

***Edward J. Kaiser**—land use planning methods; development management techniques; land use approaches to natural hazards mitigation and environmental protection.*

***Linda Lacey**—population, housing, and urbanization policies in African countries.*

***Michael I. Luger**—infrastructure provision and finance; state technology policy, universities and economic development; housing and labor markets, transportation economics.*

***Emil E. Malizia**—economic structure and performance of labor market areas; real estate market analysis; financing local economic development; community development and housing.*

David H. Moreau—equity in infrastructure finance; water and sewer planning; drought management for water supplies; ground water quality; watershed protection.

Helzi Noponen—informal sector and gender issues in developing countries; poverty and inequality; economic development.

William Rohe—neighborhood and community studies; determinants of residential satisfaction; national, state, and local housing and neighborhood revitalization policy; program evaluation.

Michael A. Stegman—national housing policy; analysis of state and local low-income housing initiatives; low-income home ownership; housing finance; impact fees.

Brian D. Taylor—transportation finance; politics of transportation planning; access equity; urban transportation history.

Dale Whittington—water and sanitation in less developed countries; computerized information and development planning; impact analysis of environmental standards.

In addition to the regular faculty, adjunct faculty in other UNC-Chapel Hill departments, at nearby institutions in the Research Triangle area, such as the Research Triangle Institute, provide guidance to Ph.D. students and serve on doctoral committees. Additional information on the regular and adjunct faculty is provided with the area of specialization described earlier in this publication.

Further Information on the Doctoral Program in Planning

Further information about the doctoral program in planning may be obtained from the program director: Professor Harvey A. Goldstein, Director, Doctoral Program, Department of City and Regional Planning, Campus Box 3140, New East, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3140.

Opportunities for Experience in Research and Practice

Students enrolled in the Department of City and Regional Planning have many opportunities to become involved in research and planning practice. The research or practice opportunities, however, are as varied as the department's programs of study and individual faculty members' and students' interests.

The department occupies the four stories of New East, a historical building in the center of campus. New East contains microcomputer and planning laboratories, lecture and seminar rooms, faculty and student offices, administration and student services offices, a student lounge, and the F. Stuart Chapin, Jr., research library. The department also maintains additional laboratory space in Hanes Hall, and operates research facilities, described below, at the Center for Urban and Regional Studies in Hickerson House.

Through these facilities, as well as the Institute for Environmental Studies, the Water Resources Research Institute, the Carolina Population Center, and the Institute for Research in Social Science, members of the faculty and graduate students collaborate on projects in a wide range of subject areas concerning planning, human behavior, and the environment.

Microcomputer Labs

Bruce Egan, Director of Information Systems

The Department of City and Regional Planning operates two microcomputer labs in New East and students also have access to the Department of Geography's Geographic Information System Lab in Saunders Hall. Both labs in New East provide a full array of word processing, data management, statistical, graphical, financial, and geographic information systems software. In addition, students are provided with complete access to the computerized library card catalogs at UNC-Chapel Hill, Duke, and NC State, electronic mail connections to public and private institutions throughout the world, and communications to the mainframe computers at the UNC Computer Center and in the Research Triangle Park. The New East labs are open on a 24-hour a day basis, and are equipped with laser printers and pen plotters. Additional lab facilities are provided in Abernethy Hall and Hickerson House for students working in specialized programs. Introduction to, and training in, a variety of software packages is part of the department's curriculum, and all students are given hands-on training to become proficient in the use of these tools.

F. Stuart Chapin, Jr., Planning Library

Linda Drake, Librarian
Betty B. Geer, Assistant Librarian

The Chapin Planning Library is one of the outstanding planning collections in the country, with some 17,000 volumes, over 1800 bound journals, and more than 350 serial titles currently received. The library houses a specialized collection of over 9,000 research reports and documents from planning agencies throughout the U.S.

Graduate students also have ready access to other university library resources. The campus library system has over 4 million volumes, 3.1 million documents, and 2.9 million microforms. It is one of the more important research collections in the Southeast. Through a joint computer catalog, the resources of the libraries at UNC-Chapel Hill are linked with those at Duke University and North Carolina State University. Davis Library—which houses the University's general collections—is a short walk from the department's facilities in New East. Specialized services include online com-

puter searching, reference assistance, and U-Search (a do-it-yourself computerized search service of databases available on CD-ROM).

Center for Urban and Regional Studies

David J. Brower, Associate Director

The Department's Center for Urban and Regional Studies, established in 1957, is a focal point for urban research and public service at UNC-Chapel Hill. Also serving as a catalyst for interdisciplinary urban research programs, the center's staff, associated faculty members, and students work regularly with federal and state government agencies and with regional bodies and local governments to solve problems of center city revitalization, energy use and conservation, environmental management and protection, low-income housing, natural and manmade hazards, public service delivery, transportation, urban growth management, and water resources, among others.

With research in progress regularly exceeding $1 million, the center receives national attention and recognition for its studies on urban growth management, coastal zone management, the mitigation of natural hazards, new community and other large-scale development, housing market dynamics, urban growth models, residential mobility and locational preferences, environmental protection, and planning and financing urban infrastructure. The center's research and service activities are carried out by a professional and clerical staff and by faculty, research associates, and graduate students supported in part by research grants and contracts. The department's faculty and students also collaborate through the center with faculty and students of other university departments on urban planning and policy-oriented research projects.

Institute for Economic Development

Edward M. Bergman, Director
Emil E. Malizia, Director, Economic Development Course

The Institute for Economic Development coordinates a technical assistance program within DCRP that brings graduate students to needy communities. Through the program, graduate students enrolled in PLAN 261 and PLAN 263 receive course credit while providing complimentary appraisals of local economies for public, non-profit, and private sector clients throughout the U.S.

Other institute activities include research contracts and grants for federal, state and local clients, including possibilities of faculty and student study by participating in an exchange program with the Vienna University of Economics. Institute faculty conducting research projects frequently offer research assistantships to students with skills needed on current projects. The institute helps coordinate a Tennessee Valley Authority program that combines an academic year assistantship with summer placement as a regional economic development planner in Knoxville, Tennessee. Other paid internships during the academic year are available to students who want direct work experience in community development agencies. Faculty help students secure academic year internships, summer internships, and career positions in development planning organizations.

Finally, the institute cosponsors the Economic Development Course (EDC), a week-long, in-service training course accredited by the American Economic Development Council offered to professional developers through the UNC-Chapel Hill Division of Continuing Education.

Institute for Research in Social Science

John S. Reed, Director

Founded in 1924 by Howard W. Odum, the Institute for Research in Social Science (IRSS) provides research resources for the social science community, both faculty and students, at the University. The Institute holds conferences and colloquia, and publishes books and journals to promote interdisciplinary communication. The IRSS Colloquia, held weekly, provide a forum for the exchange of ideas across disciplines. The Social Science Statistical Laboratory develops and maintains computer hardware, software, and human expertise in the collection, analysis, and archiving of verbal and quantitative data. Laboratory staff offer short courses and provide consultation in statistical methods, data management, programming, use of hardware, and data analysis strategies. The Social Science Data Library acquires and maintains computer-readable data to meet a variety of teaching and research needs.

Institute for Environmental Studies

Frederic K. Pfaender, Director

The Institute for Environmental Studies, established in 1973, is a focal point for interdisciplinary research, teaching, and environmental public service. Department of City and Regional Planning faculty and students use the institute to participate with other departments in research, seminars, and discussions on broad aspects of environmental quality in the natural and social sciences, engineering, and public health. The Institute for Environmental Studies also sponsors a guest speaker series, a statewide technical assistance and outreach program, and the Student Community Involvement Program, which offers a modest stipend ($250) to students who wish to apply academic work such as a class project or departmental paper to current environmental issues identified by the Institute staff.

Carolina Population Center

Ronald Rindfuss, Director

The Carolina Population Center, established in 1966, provides coordination of the university-wide, interdisciplinary program in population research and training. Its efforts span the social, behavioral, and health sciences, and it provides research services to faculty doing research in the United States and abroad. City and Regional Planning faculty and students are engaged in community development research in less developed countries through the CPC.

Water Resources Research Institute

David H. Moreau, Director

The Water Resources Research Institute was established in 1964 to support research on all aspects of water resources including the planning, programming, and analysis of urban and regional systems for development and control of the quantity and quality of water and related land use. The institute is a focal point for faculty and student research and interdisciplinary seminars relating to water resources. Recent projects of the institute involving departmental faculty and student research assistants include studies on the protection of drinking water watersheds, drought management, water and sewer extension policy, and water and sewer pricing.

Water and Sanitation for Health (WASH) Project

Dale Whittington, Director

UNC-Chapel Hill is a major participant in a consortium which assists the U.S. AID Office of Health and the AID missions overseas with projects related to the United Nations International Drinking Water and Sanitation Decade. Department of City and Regional Planning students have assisted with studies of drinking water supplies in the Caribbean and Africa.

Special Programs and Services

The community of students, faculty, staff, and alumni of the Department of City and Regional Planning work closely together, providing a stimulating environment for learning. Students play an important role in policy making. Students and faculty share responsibilities on the Curriculum, Admissions, Faculty Search, Ph.D. Policy, and other committees. There are student organizations which raise policy issues within the department and sponsor various workshops and symposia dealing with topics of student interest.

Interests and issues change over time, and so have the various student organizations and programs. Student groups have included Women in Planning, which dealt with the specific concerns of women in the planning profession. Other interests which have been represented by student groups include the Minority Planning Students Association and Planners for Social Change. Each year's class differs and the opportunity exists to create groups and activities to meet new needs.

PLANNER'S FORUM

Every student in the department is a member of Planner's Forum. The forum addresses and anticipates broad policy concerns, coordinates student affairs, and organizes major social events and intramural athletic teams. It sponsors visiting speakers and arranges faculty forums, workshops, and symposia. Planner's Forum also coordinates student participation in state and national planning organizations, such as the North Carolina Chapter of the American Planning Association.

CAROLINA PLANNING

In its eighteenth year of publication, Carolina Planning is published each semester by students in the Department of City and Regional Planning. As one of only a few student-run planning magazines in the country, Carolina Planning is a unique asset to the department and offers excellent opportunities for students to publish articles or gain experience in publishing a periodical. The magazine focuses on planning issues of particular interest to the Southeast; its outlook is broad, and its subscription list is nationwide.

DCRP ALUMNI ASSOCIATION

With its officers, board of directors, and broad membership, the DCRP Alumni Association serves as a means for alumni, friends, and the department to work together. The association enables alumni and friends to play an active role in the affairs of the department, provides a means for recognizing contributions and accomplishments of alumni and friends, fosters camaraderie among alumni, faculty, and students, and provides a means through which alumni and friends may contribute to the well-being of the Department of City and Regional Planning. The association sponsors alumni gatherings at annual meetings of the American Planning Association in the spring and periodic reunions and conferences in Chapel Hill. It also helps the department publish an alumni newsletter. An important goal of the association is to help students and newer graduates in their early professional careers.

Representatives of the Alumni Association live in most areas of the country. They are happy to talk with people exploring a career in planning or

who are interested in the planning education program at UNC-Chapel Hill. After graduation, the alumni network is a lifelong resource for graduates seeking advice about professional matters and opportunities for career advancement.

APA, ACSP, UAA, AND OTHER ASSOCIATIONS

The department is accredited by the American Institute of Certified Planners and the Association of Collegiate Schools of Planning. DCRP faculty members are active in the American Planning Association (APA) and the American Institute of Certified Planners (AICP). Faculty have served on the board of directors of the American Planning Association, chaired APA divisions, and edited the Journal of the American Planning Association (most recently from 1984-1988). They have played equally active roles in the North Carolina professional chapter of APA, recently serving as president and vice-president for professional development. In ACSP, the national association of planning educators, North Carolina planning faculty have served in a variety of leadership positions, most recently chairing its committee on urban policy, and participate actively each year in the association's annual meeting. UNC-Chapel Hill was a founding member of the Urban Affairs Association, the association of universities with urban educational and research programs.

The faculty is active in numerous other professional organizations. They include the American Association for the Advancement of Science, American Bar Association, American Economic Association, American Economic Development Council, American Real Estate and Urban Economics Association, American

Society of Civil Engineers, American Society for Public Administration, American Statistical Association, American Water Resources Association, American Water Works Association, Association for Public Policy Analysis and Management, Association of State Floodplain Managers, Council for Entrepreneurial Development, Institute of Transportation Engineers, InterAmerican Planning Society, National Association of Housing and Redevelopment Officials, National Council for Urban Economic Development, National Low Income Housing Coalition, National Tax Association, Planners Network, Regional Science Association, Royal Economic Society, Southern Regional Science Association, Southern Sociological Association, Town and Country Planning Association, Transportation Research Board, and Urban Land Institute.

HUMPHREY FELLOWS PROGRAM

The department hosts the Hubert H. Humphrey Fellowship Program (a Fulbright Exchange activity). Funded by the U.S. Information Agency and administered by the Institute of International Education, the program brings accomplished professionals from developing countries to the United States at midpoint in their careers for a year of study and related practical professional experience. During 1992-93, the department hosted ten Hubert H. Humphrey Fellows from Bangladesh, Colombia, Ethiopia, Indonesia, Nepal, Pakistan, Sri Lanka, Thailand, Turkey, and the West Bank. For more information about this program, contact Professor William M. Rohe, Department of City and Regional Planning, Campus Box 3140, New East, UNC-Chapel Hill, Chapel Hill, NC 27599-3140.

Admission and Degree Requirements

The department considers all credentials submitted as part of the application. No single factor is regarded as qualifying or disqualifying. Factors considered in the review of all applications include the academic transcript and grades, GRE scores, references, strength of undergraduate institution, statement of interest, and professional experience. The statement of interest should demonstrate commitment to the planning field. The student's overall academic record should be strong with a grade-point average of B or better. The prospective student must hold a bachelor's degree from an accredited college or university. The Graduate School makes admissions decisions on the basis of recommendations by the department. In addition, the doctoral program gives special consideration to applicants whose research interests and career goals are well matched to those of the faculty.

The department has a strong commitment to increasing opportunities for minority and disadvantaged persons to enter the planning profession. We actively encourage admission of women and racial minorities. In addition, we admit students from a variety of academic backgrounds, work experiences and geographic locations. Although previous professional or preprofessional work experience in planning or a related field is not required, it is considered in admission decisions. Most members of each class have planning-related experience.

ADMISSION PROCESS

Applications are reviewed each year beginning on February 1. Applications for the fall semester must be completed by January 31 to be considered for university fellowships and other university financial awards. Departmental decisions on admissions and financial aid are made in April. The process is generally completed by May 15. Admission at the opening of the spring semester is considered only when unusual circumstances pretain. Applications for admission in the spring semester must be received by October 15, but a September deadline is recommended.

The Open House Weekend, hosted by the department each March, provides applicants an opportunity to learn about the department and discuss their professional interests with faculty, enrolled students and other applicants. Applicants are encouraged to visit the department for personal interviews during the Open House Weekend. Visiting applicants should contact the department well in advance for personal interviews at other times.

Forms and instructions for application will be mailed by the department on request. Direct inquiries to:

Ms. Patricia Coke, Student Services Manager
Department of City and Regional Planning
CB# 3140,
UNC-Chapel Hill
Chapel Hill, NC 27599-3140
Telephone: 919/962-3983

Each applicant is required to pay a nonrefundable $55.00 fee when submitting an application.

All applicants are required to take the Graduate Record Examination (GRE) and to submit a statement of interest, transcripts of all institutions attended, and a minimum of three letters of reference. The Test of English as a Foreign Language (TOEFL) is required for all applicants whose native language is not English.

The Graduate Record Examination, which should be taken as early as possible (preferably in October prior to the beginning of the academic year in which the student wishes to enter

the department), is administered five times a year in conveniently located centers throughout the United States and in many other countries. To be eligible to take the examination, the candidate must have an application accompanied by the appropriate fee on file approximately 15 days in advance of the scheduled date of the examination. Examinations are generally scheduled in October, December, February, April, and June. A bulletin of information giving full particulars may be obtained from most colleges and universities or by writing to Graduate Record Examination, CN 6000, Princeton, NJ 08541-6000.

TRANSFER CREDIT

Doctoral students can transfer graduate level courses from other universities. Masters students desiring to transfer to The University of North Carolina at Chapel Hill from another graduate planning program may do so up to a maximum of 12 semester credit hours providing that the courses were not credited to another degree, a grade of "B" or better was received and that the courses are judged by the department to be appropriate to the student's program. Graduate courses taken while in undergraduate status at other universities are not transferable.

MASTER'S DEGREE REQUIREMENTS

Programs of study leading to the Master of Regional Planning (MRP) degree are available in the areas of economic development, land use, environmental planning, coastal management, housing, real estate development and community development, transportation, water resources, and infrastructure finance. Curricular requirements for specializations within each of the focus areas are discussed in detail in the MRP program section of this catalog. In addition, the following are requirements for the MRP degree:

Residence. The minimum academic residence period is three semesters.

Time Limit and Credit Hours. All requirements for the master's degree must be completed within five calendar years from the first date of registration with a minimum of 48 semester hours of credit. Most students complete their requirements in two years.

Masters Project. The masters project serves in lieu of an academic thesis or comprehensive exam to demonstrate the student's capabilities and readiness for professional practice. The masters project is original work, involving a substantial degree of independent research and/or analysis of a topic related to planning practice. The project may be a research paper, a critical essay, the development or evaluation of a program, project, or plan, or other original piece of work in some other form.

DOCTOR OF PHILOSOPHY DEGREE REQUIREMENTS

The Ph.D. requires a minimum of 30 credits taken at The University of North Carolina at Chapel Hill. Students and a specially assigned three-person committee develop an individualized program of study to provide a mastery of his or her field of specialization, planning theory, and research methods. A student may take a formal minor in another discipline with the consultation and approval of the appropriate department and the student's program committee. The minor emphasizes the achievement of theoretical knowledge and methodological and related skills necessary to extend the student's research capabilities within a chosen area of specialization.

In addition to courses in the area of specialization, course work must be completed in planning theory and research methods. Students usually fulfill the planning theory requirement by taking PLAN 205 Advanced Planning Theory; the necessary prerequisite PLAN 204 Planning Theory, and other courses and special preparation that may be recommended. Doctoral students must gain proficiency in two areas of research methods: policy-oriented research design and statistical techniques of data analysis. The former may be met by taking PLAN 301 The Design of Policy Oriented Research, and PLAN 302, Advanced Seminar in Research Design. Students can achieve the minimum level of competency in the latter area by taking courses in statistical methods through an intermediate level of multivariate statistics (analysis).

During the second or third semester of residency, each Ph.D. student registers for an independent study. The independent study leads to a paper that comprehensively reviews the scholarly literature in one's area of specialization and identifies one or several fruitful dissertation topics. This paper is submitted to the student's program committee to assess progress toward the degree and to provide advice and feedback.

An important objective of the department's Ph.D. program is to train top quality and highly motivated teachers of planning. Teaching experience is, therefore, considered an important element of a doctoral student's training. Students, their advisers, and program committees are expected to provide for at least one semester of teaching experience, preferably more, as an explicit element of the program of study.

Comprehensive Exam Requirement. A set of written comprehensive exams are taken shortly after completing all of the coursework. The written exams cover the student's area of specialization, research methods, and planning theory. Each Ph.D. student also takes an oral exam based upon a completed dissertation proposal. The oral exam may be taken before or after the written exams.

There is no foreign language requirement.

Dissertation Requirement. The conduct of original research requires abilities different from those required to pass formal courses and examinations. Accordingly, in the doctoral program, great weight is placed on research performance at all stages of development—from the literature review and development of competence in research methods and statistical analysis to the interpretation of results and formation of conclusions. The scholarly value and feasibility of the dissertation topic must be approved by the student's dissertation committee. The dissertation is expected to be a significant contribution to the field and must be successfully defended at the final oral examination.

Residence Credit, Transfer of Courses, and Time Limit. The time limit for the Ph.D. degree is eight calendar years from the first date of registration. Typically, most students complete the requirements within four years. There is no limit on the number of credits which can be transferred. Courses transferred from other graduate schools for application toward degree requirements must have been taken within the eight-year limit. At least two semesters of full-time residency equivalency (nine or more hours) must be taken in continuous registration on this campus. That requirement may be filled by two consecutive regular semesters of full-time registration (nine or more credit hours) or three semesters of consecutive registration of at least six credit hours. A minimum of four semesters of residency is required overall.

Financial Assistance

Applicants to the Department of City and Regional Planning are eligible for several types of fellowships and assistantships: (1) awards made by the department; (2) university awards for which applicants to the department are considered; and (3) awards made by outside agencies for which applicants to the department are considered.

Applications for departmental financial aid and Graduate School fellowships are made on the admission application form. All applications for aid will automatically be considered for all sources of aid for which they qualify; the student does not have to apply separately for each. However, applicants' qualifications for awards requiring specific program interests or skills must be adequately documented in their applications in order to be considered for these sources of aid.

In addition to assistantships awarded through the Department of City and Regional Planning and the Graduate School, significant levels of support are provided to graduate students by the Office of Scholarships and Student Aid. A separate application for assistance is required. It is extremely important for graduate students to complete and submit the Free Application for Federal Student Aid (FAFSA) so that it will be on file prior to the time when a loan or work study employment is needed. The priority filing date is March 1. Forms and additional information can be obtained from the Office of Scholarships and Student Aid, Campus Box 2300, Vance Hall, UNC-Chapel Hill, Chapel Hill, NC 27599-2300, or call 919/962-8396. The FAFSA is also available from most college and university financial aid offices.

AWARDS MADE THROUGH THE DEPARTMENT

Department of City and Regional Planning Assistantships for masters students provide up to $5,000 to incoming students with outstanding undergraduate records and the potential for making significant contributions to the planning profession.

Doctoral Assistantships and Fellowships provide up to $6,000 in financial support for each Ph.D. student admitted to the department. The department's policy is to provide this support to doctoral students for the first two years of study, after which virtually every student retains financial support by working with a faculty adviser on a sponsored research project or by teaching.

Downtown Housing Improvement Corporation of Raleigh, N.C., provides an internship during the academic year and summer employment with the corporation working on nonprofit housing programs and projects.

John A. Parker Fellowship, funded by the John A. Parker Trust, was created by alumni and friends of the department in honor of its founder and first chairman, John A. Parker. An award is made to a second-year student with high potential for contribution to the field of planning.

The Louise Venable Coker Prize is a $200 cash award presented for the most outstanding Masters Project completed by a second-year student in the department.

Robert E. Stipe Assistantship in Historic Preservation provides $4,000 in support to a student with career interests in historic preservation and its application to land use planning, urban revitalization, or real estate development.

Tennessee Valley Authority Assistantship provides $5,000 in support to a student in the Economic and Community Development area of specialization. Additional support, including a travel allowance, is provided through a summer internship with TVA.

Transportation Management Internships, jointly sponsored by the North Carolina State Department of Transportation and local transportation operators, provides work and learning opportunities. Interns receive $3,820 for the academic year and a salary for summer work.

U.S. Housing and Urban Development Work Study Program provides a stipend of $8,000. Under this program, students are expected to work in a planning or planning-related agency that administers Community Development Block Grants or Urban Development Action Grants. To be eligible, students must come from economically disadvantaged backgrounds and have experience working with economically disadvantaged groups.

Graduate Teaching and Research Assistantships, provided through state funds as well as through research grants and contracts to the Center for Urban and Regional Studies and Institute for Economic Development, pay up to $4,000 per year.

Students who are awarded departmental teaching/research assistantships may be recommended for a special tuition rate as part of the award package. The special tuition rate enables out-of-state students who will be performing specified assistantship duties to pay similar *tuition to that of resident* students: $846 rather than the out-of-state tuition rate of $7,888 at the time this is written.

UNIVERSITY AWARDS FOR WHICH APPLICANTS TO THE DEPARTMENT ARE CONSIDERED

Graduate School Fellowships pay up to $12,000 for the academic year plus tuition benefits. Graduate School Merit Assistantships pay $9,000 for the academic year plus tuition remission.

MINORITY PRESENCE AWARDS

Under the Board of Governors' general Minority Presence Grant Program, black students may be eligible for special financial assistance if they are residents of North Carolina, enrolled for at least three hours of degree-credit course work, and demonstrate financial need.

The Minority Presence Grant Program for Doctoral Study provides stipends of up to $9,000 for the academic year with an option of additional support in the amount of $500 for study in

Assistant Professor Glenn Cassidy.

the summer session, for black residents of North Carolina who are selected to participate. Recipients must be full-time students pursuing doctoral degrees at The University of North Carolina at Chapel Hill.

The Patricia Roberts Harris (PRH) Fellowship Program is administered by, and contingent upon funding by, the U.S. Department of Education. Its purpose is to increase representation of minorities and women in graduate and professional education. The PRH fellowship provides a stipend of up to $7,500 for 12 months, plus tuition and fees.

AWARDS MADE BY OUTSIDE AGENCIES

A number of governmental agencies and nonprofit organizations provide internships for planning students during the academic year and summer. The Department of City and Regional Planning maintains a file of internship opportunities and assists students in contacting potential employers.

STUDENT LOAN FUNDS

The general loan funds, including the federal loan program, are available to graduate students. University loan funds are announced in the University catalog. Students interested in applying for loans should contact the Office of Scholarships and Student Aid Office, Campus Box 2300, Vance Hall, UNC-Chapel Hill, Chapel Hill, NC 27599-2300 or call 919/962-8396. The students and administrative staff of the department are presently collaborating on maintaining an inventory of internship and job placement opportunities.

Fees and Expenses for One Year

	In-State	Out-of-State
Tuition	$ 846	$7,888
Fees	$ 599	$ 599

Tuition and fees are due at registration. Failure to pay at the proper time will result in a late payment fee and the student's possible disenrollment.

An applicant who has been offered admission reserves his or her place by the payment of a $50 enrollment deposit which is credited toward the first semester's tuition. If he or she fails to withdraw the application prior to May 1, the deposit is forfeited.

The University reserves the right to make, with the approval of the proper authorities, changes in tuition and other fees at any time.

Student Services Manager Pat Coke.

Students in the department should be prepared to meet expenses that may occur in connection with various courses. These may include the cost of supplies, occasional travel to nearby communities, typing, photo-duplication, and materials for presentations.

Description of Courses

Regularly Scheduled Courses for Undergraduates

46 INTRODUCTION TO URBANISM AND PLANNING (3). Discussion and analysis of current urban problems and of forces responsible for urban and regional growth. Historical perspective on the planning profession and the planning approach to urban phenomena. Evaluation of current proposals dealing with aspects of the urban situation in the United States. Fall. Faculty.

67 ETHICAL BASES OF PUBLIC POLICY DECISION-MAKING (PUPA 67) (3) Critical exploration of ethical and theoretical bases for making public policy decisions. Analysis of normative arguments of contemporary public policy issues. Fall. Faculty.

73 URBAN POLICY (PUPA 73) (3). A selection of public policy topics on the current urban agenda, with a focus on the political context. Particular stress on policy alternatives, feasibility, implementation and the division of responsibility and coordination among levels of government and the private sectors. Fall or spring. Faculty.

94A FUTURES ANALYSES AND FORECASTING (3). An examination of the concepts and methods used in forecasting. Extrapolative techniques and futures analysis methods. The application of forecasting techniques in various institutional settings. Fall. Faculty.

99 HONORS SEMINAR IN URBAN AND REGIONAL STUDIES (3). An overview of the subject matter and methods of investigation of the several disciplines in relation to the study of cities and regions. Discussions supplemented by presentation of original papers prepared by students. Fall or spring. Faculty.

Regularly Scheduled Courses for Graduates and Advanced Undergraduates

110/111 SELECTED TOPICS IN URBAN STUDIES (3). An introduction to the functioning of the urban area as a complex system and to the analysis of policies aimed at development and change. Fall or spring. Faculty.

124 URBANIZATION AND PLANNING IN THE THIRD WORLD (3). Surveys theories, issues, and planning strategies employed in developing countries. Topics include rapid population growth and urbanization, squatter settlements, regional inequalities, problems of the urban and rural poor, women in the development process, financing urban development, rural development strategies, regional development planning, human settlement approaches, and national urbanization policies. Fall. Lacey.

125 URBAN SERVICES AND INFRASTRUCTURE (3). Prerequisite, PLAN 210 or equivalent. An examination of the public services provided by local governments and the facilities required to provide them. The course concentrates on transportation, water management, waste treatment, and telecommunications, though other sectors may also be examined. Each urban service is examined with respect to its institutional framework, alternative service delivery mechanisms, economic implications, and history. The course provides a rigorous analysis of the financing, pricing, and public regulation of these services, and covers methods for measuring their impacts, efficiency, and effectiveness. Fall. Luger.

126 URBAN TRANSPORTATION PLANNING (3). Fundamental characteristics of the urban transportation system as a component of urban structure. Methodologies for the analysis and planning of urban transportation. Techniques for the analysis of problems and the evaluation of plans. Spring. Taylor.

127 PUBLIC TRANSPORTATION (3). A seminar investigating alternative public urban transportation systems including mass transit, innovative transit services, and paratransit schemes. The systems will be examined from economic, land use, social, technical, and policy perspectives. Spring. Taylor.

128 TRANSPORTATION POLICY AND PLANNING (3). A seminar investigating alternative public urban transportation systems including mass transit, innovative transit services, and paratransit schemes. The systems will be examined from economic, land use, social, technical, and policy perspectives. Fall. Taylor.

129 TRANSPORTATION PLANNING MODELS (3). Techniques for predicting transportation demand. The transportation planning process: data collection, trip generation, modal choice, trip distribution and assignment. System evaluation techniques: social, economic, and environmental impacts of transportation; investigation of innovative modeling techniques. Fall. Faculty.

130 QUANTITATIVE ANALYSIS FOR PLANNERS AND PUBLIC MANAGERS (3). Foundation course in statistical concepts and methods primarily for professional master's degree candidates and public policy majors. Descriptive statistics, esrimation and hypothesis testing, simple correlation and regression, and information acquisition, analysis and presentation. Microcomputer laboratory. Fall. Malizia and Faculty.

131 QUANTITATIVE METHODS IN PLANNING (3). Fundamental quantitative methods as aids in prediction and decision making in planning, including multivariate statistics, decision analysis, and linear programming and simulation. Spring. Faculty.

136 GEOGRAPHIC INFORMATION SYSTEMS (GEOG 191) (3). Thematic data sets will be used to model and test interactions between spatially oriented information for resource evaluation. Modelling techniques, cartographic output, data overlay methods, and "hands on" computer application will be featured. Fall, spring. Walsh.

142 GENDER ISSUES IN PLANNING AND DEVELOPMENT (WMST 142) (3). An examination of the experience of women in the urban environment and economic development process in the developing world. Topics include women's contributions to development, differential impact of urban planning and development on women's condition; methods for incorporating gender analysis into planning; and impacts of global economic change on women, especially in the informal sector of the economy. Fall. Noponen.

153 ENVIRONMENTAL MANAGEMENT AND POLICY (ENVR 153, PUPA 153) (3). The course provides an intensive introduction to the field of environmental management and policy, including basic concepts and approaches, major elements and institutions, policy instruments, and environmental policy analysis. Particular emphasis is given to policies and management strategies for protecting ecological processes and human health against environmental risks. Fall. Andrews.

175 QUANTITATIVE ANALYSIS FOR PUBLIC POLICY (POLI 175, PUPA 175, SOCI 175) (3). Application of statistical techniques, including regression analysis , in public policy program evaluation; research design and data collection and management. Spring. Faculty.

Courses for Graduates

200/201 SPECIAL TOPICS IN PLANNING AND URBANISM (3). Reading and discussions to provide opportunities to develop new concepts and topics in various aspects of city and regional planning. Fall or spring. Faculty.

204 THEORY OF PLANNING I (3). Concepts and logic of planning as a professional activity. Critical overview of current theories leading students to development of a personal philosophy applicable to their work as planners. Fall, spring. Bergman and faculty.

205 THEORY OF PLANNING II (3). Construction of methodologies for evaluating various theories of planning and intensive analysis of the North American planning theory literature. Doctoral-level introduction to the area. Spring. Goldstein.

207 PROFESSIONAL COMMUNICATIONS (Var.). Workshop on effective professional communications skills. Writing module focuses on relationship between writer and written work to build personal strength of expression. Oral/graphics module focuses on engaging speaker's natural descriptive and persuasive powers, and on using graphics for problem-solving, presentations, and group facilitation. Spring. Godschalk.

210 ECONOMIC ANALYSIS FOR PUBLIC POLICY PLANNING (3). Principles of microeconomic analysis for public policy planning. Emphasis on applications of theory and methods of economic analysis to policy problems in the public sector. Fall. Cassidy.

214 URBAN SPATIAL STRUCTURE (3). An introduction to principal theories and empirical evidence of the contemporary spatial development of metropolitan areas in the United States. Topics include spatial analysis techniques; locational behavior of industrial, residential, retail, and office activities, and public facility location; theories of neighborhood change; political organization of metropolitan regions; impacts of demographic and technological change and public policies on urban spatial form in residential neighborhoods; normative and future perspectives on urban spatial form. An analysis of the spatial development trends of a metropolitan area using census and other spatial information sources is a course requirement. Fall. Taylor, faculty.

219 WATER POLICY IN LESSER DEVELOPED COUNTRIES (ENVR 219) (3). Application of multiobjective programming and planning techniques to environmental and resource management problems. Includes a review of selected management and planning models of water quantity and quality, air quality, land use, and public facilities location. Fall. Whittington.

222/223 PLANNING WORKSHOP (3). Problem-solving, client-based course designed to give students experience in applying planning theory and methods to actual problems. Types of problems include growth management, land use planning, regional planning, community development, transit management, municipal facilities planning, developing areas planning, infrastructure financing, economic development, and environmental management. Second-year students select the section which most closely relates to their specialization. Fall or spring. Faculty.

223A REAL ESTATE MARKET AND FEASIBILITY (3). Applications workshop focused on the real estate development process in which student teams demonstrate the feasibility and desirability of an entrepreneurial, commercial, industrial, residential, office, or mixed-use project. Spring. Malizia.

225 PUBLIC ECONOMICS FOR PLANNING AND POLICY (PUPA 225) (3). The economics of the public sector, including welfare economics and cost-benefit analysis, principles of federal finance, regulation, trade, and related topics. Applies theory to policy problems. Spring. Cassidy.

226 STATE AND LOCAL PUBLIC FINANCE (3). Introduction to state and local fiscal institutions and analytical tools for designing and evaluating fiscal policies. The course covers theory of local government, public expenditure determination, financial reporting, pension systems, state and local taxes and user charges, and the municipal bond market, stressing the underlying economic theory so as to determine normative and positive criteria for evaluating government policies and institutions. Rigorous examination of specific situations commonly encountered by officials in state and local governments. Fall. Cassidy.

232 PUBLIC INVESTMENT THEORY AND TECHNIQUES (ENVR 282, PUPA 232) (3). Basic theory, process, and techniques of public investment planning and decision making, involving synthesis of economic, political, and technologic aspects. Theory underlying benefit-cost analysis, adaption to a descriptive and normative model for planning public projects and programs. Special focus on project evaluation in the Third World. Spring. Whittington.

233 NATURAL RESOURCE LAW AND POLICY (ENVR 283) (3). An examination of the law of resource use and development, its administration and underlying policies. Particular attention is given to water resources law, regulatory law, and natural resource administration . Fall. Heath.

234 WATER RESOURCES PLANNING AND POLICY ANALYSIS (ENVR 284) (3). Introduction to water resources planning and management. Emphasis on federal and state water resources policies and development of analytical skills for identification of environmental problems associated with urban water resources development. Fall. Moreau.

235 ADVANCED REMOTE SENSING (GEOG 277) (3). Computer and field work enhancements of LANDSAT data are emphasized providing "hands on" experience for graduate students interested in remote sensing specializations. Applications of LANDSAT data in a variety of land use categories will promote knowledge and skill in interpretation and problem solving by remote sensing techniques. Spring. Walsh .

237 COASTAL MANAGEMENT POLICY (3). Analysis of national and state coastal management, laws, policies, and programs. Private sector, interest group, government agency, and public roles in coastal resource allocation. Influence of science, values and politics. Fall. Brower and Owens.

239 POLICY WORKSHOP (POLI 239, PUPA 239) (3). Application of theories and techniques of policy analysis and planning to current public problems for actual clients. Focus on design and execution of policy research, and interpretation and presentation of results. Topics may vary from section to section and year to year. Spring. Faculty.

240 LAND USE AND ENVIRONMENTAL POLICY (3). History, institutional setting, rationale of state and local land use and environmental policies. Program and policy frameworks, public and private actors, political and market processes, resource utilization concepts, and policy issues in contemporary development and resource management. Fall. Brower.

241 LAND USE AND ENVIRONMENTAL PLANNING (3). Methods of land and environmental planning at urban and regional scales. Analysis of land use and capability, environmental impacts, population and economic change, and infrastructure capacity. Preparation of land use and critical areas plans. Spring. Godschalk and Kaiser.

242 PROJECT AND SITE PLANNING (3). Techniques of site analysis, project programming, and arrangement of structures on the land. Workshop covering design and review of urban development projects, within limitations of regulatory standards and market criteria. Fall. Godschalk and Rimer.

244 DEVELOPMENT AND ENVIRONMENTAL MANAGEMENT (3). Coordination of public powers and private actions to implement development plans and conserve environmental resources. Regulatory, public investment, incentive, and policy instruments used in land use and environmental guidance systems. Fall. Kaiser.

245 DEVELOPMENT IMPACT ASSESSMENT (3). Methods for data management and predictive analysis of the environmental, transportation and other infrastructure, fiscal, and social impacts of land development projects. Impact mitigation measures are also examined. Spring. Faculty.

246 GIS FOR PLANNERS (3). A laboratory/lecture combination focused on learning and applying Arc/Info GIS to typical planning problems; covers data capture, data display, data manipulation, modeling (e.g., network analysis, overlay analysis, suitability analysis.) Spring. Faculty.

251 REAL ESTATE INVESTMENT AND AFFORDABLE HOUSING (3). Fundamentals of real estate investment analysis; techniques of investment analysis, including computer applications and modeling; applications dealing with the public interest in private investment decisions; the role of tax and other public policies in influencing real estate investments; and affordable housing. Taught by the case method. Spring. Stegman, Faculty.

252 HOUSING AND PUBLIC POLICY (3). A theory-based course in housing and market dynamics; the justification for government intervention in the housing market; the structure and operations of the mortgage market and construction industry; the economics of housing markets and housing market analysis; problems of racial discrimination, substandard housing, the homeless, affordability; evaluation of public policies, including rent regulations, housing allowances, and subsidized production programs. Fall. Stegman, Faculty.

253 ISSUES IN HOUSING MARKET-DYNAMICS (3). Prerequisite, PLAN 252 or permission of instructor. Detailed inquiry into a number of theoretical issues relating to market dynamics; the formulation, execution, and evaluation of housing policy. Among the possible subjects of investigation are the structure of the housing market, filtering, housing costs, the nature and efficiency of the construction industry, the economics of slums. Spring. Stegman.

254 DEVELOPMENT DISPUTE RESOLUTION (3). Contemporary methods of resolving development disputes through negotiation, bargaining, and mediation. Techniques and skills applicable to solving controversies over planning and implementation of public and private development projects. Fall. Godschalk.

255 THE DEVELOPMENT PROCESS (3.0). The dynamics of development from the developer's perspective covering market research, government relations, site planning, financing, investment analysis, construction and project management, and marketing. Spring. Malizia.

257 (42) PLANNING FOR HISTORIC PRESERVATION (3). Concepts, processes, and policies for historic preservation; its role in the community planning and development process. Spring. Howard.

261 URBAN AND REGIONAL ECONOMIC DEVELOPMENT (3). Study of local economies as subnational entities with changing and volatile economic structures. Planning strategies to accumulate productive and social capital in the development of local economies and to distribute benefits of development widely. Development concepts, analysis, and individual appraisals of a local economy are stressed. Spring. Bergman.

263 DEVELOPMENT PLANNING TECHNIQUES (3). Basic analytical techniques for analyzing the development of local and regional economies. Topics include social accounts, indicator construction, location quotients, export base multipliers, shift-share analysis, regional input-output analysis, social and economic impact analysis, and regional economic forecasting techniques. Spring. Goldstein.

264 REGIONAL DEVELOPMENT THEORY (3). Review of theories and models of economic development widely used to explain and understand the development process at the local or regional levels. Theoretical perspectives supporting a mediated view of the relationship between regional economic development and planning in developing areas. Topics include economic base theory, trade theory, location theory and growth poles, product cycle theory, entrepreneurship and innovation theories. Fall. Noponen.

266 COMMUNITY DEVELOPMENT PLANNING (3). Review of social, political and economic theory on the structure and function of local communities. Modes of neighborhood change are presented, and federal, state and local programs designed to support neighborhood revitalization are described and critiqued. The role of nonprofit organizations in neighborhood revitalization is also considered. A step-by-step process for revitalizing an area is presented, and various tools and techniques for carrying out revitalization projects are discussed. Fall. Rohe.

267 LOCAL DEVELOPMENT AND FINANCE (3). How to structure commercial real estate and business development projects in the public interest. Assessing the market,matching private and public sources to uses of funds, negotiating with lenders and developers/entrepreneurs. Spring. Malizia.

268 COMMUNITY DEVELOPMENT POLICY. This course begins with a discussion of urban and community development policy from the post-war period to the present (Urban Renewal, Model Cities, Community Action, Community Development Block Grants, etc.). Particular attention is paid to lessons learned in implementing the programs. The course explores current community development

issues including homelessness, urban enterprise zones, the role of nonprofit organizations in revitalization efforts, and low-income home ownership programs. Students also read several ethnographies of life in low-income communities. Spring. Rohe.

275 POPULATION AND HOUSING POLICIES IN THE THIRD WORLD (3). Methods of analyses and policy issues concerned with population growth and slum and squatter settlements in Third World cities. Topics include demographic techniques, population policies, alternative housing solutions, such as public housing projects, sites and service schemes, and squatter upgrading, and other urban and regional solutions to improve the living conditions of the urban poor. Spring. Lacey.

288 ADVANCED ECONOMIC ANALYSIS FOR PUBLIC POLICY I (PUPA 288)(3). Economic theory applied to policy issues. Policy issues analyzed require microeconomic theory, including theory of utility and demand, organization and operation of product and factor markets, production theory, regulation, welfare economics. Fall. Cassidy.

289 ADVANCED ECONOMIC ANALYSIS FOR PUBLIC POLICY II (PUPA 289) (3). Prerequisite PLAN 288. Additional public policy issues addressed to study further applications of economic theory. issues will require principles of taxation, fiscal and monetary theory, regulation and growth theory. Spring. Luger.

300 THE USE OF RESEARCH IN THE POLICY PROCESS (PUPA 300) (3). Prerequisite PLAN 301. Systematically examines use and abuse of policy-relevant research in the policy process; connects design and execution of policy research with participants in policy process; policy cases are emphasized. Fall. Faculty.

301 DESIGN OF POLICY ORIENTED RESEARCH (PUPA 301) (3). Logic of designing research for the analysis of planning problems and the formulation of public policies. Elements of research design are examined in terms of four major methods: case study, survey research, quasi-experimental designs, and the social experiment. A detailed design of a policy-relevant research study is required. Spring. Goldstein.

302 RESEARCH PRACTICUM (PUPA 302) (3). Prerequisite PLAN 301. Practicum on the application of social science research methods to research questions and problems developed by students in PLAN 301. Emphasis is placed on the craft of research, including preparation of journal articles reporting research results, and advanced treatment of topics introduced in PLAN 301. Fall. Faculty.

310/311 PLANNING SEMINAR (Var.). Original research, fieldwork, readings, or discussion of selected planning issues under guidance of a faculty member. Fall or spring. Faculty.

315 INDEPENDENT STUDY (Var.). This course permits full-time graduate students enrolled in the Department of City and Regional Planning who wish to pursue independent study of a research or project nature to do so under the direction of a member of the department faculty. Fall or spring. Faculty.

394 DOCTORAL DISSERTATION (Var.). Faculty.

400 GENERAL REGISTRATION (0).

Officers of Administration

The University Of North Carolina at Chapel Hill

Paul Hardin, JD, *Chancellor*

Susan Haughton Ehringhaus, JD
Assistant to the Chancellor and Senior University Counsel

Douglass Hunt, LL.B.
Special Assistant to the Chancellor

David D. Dill, Ph.D.
Assistant to the Chancellor for Planning

Robert J. Cannon, Ph.D.
Affirmative Action Officer

Donald Arthur Boulton, Ed.D.,
Vice-Chancellor and Dean of Student Affairs

Arch T. Allen III, JD,
Vice-Chancellor for Development and University Relations

Howard Garland Hershey, Jr., DDS,
Vice-Chancellor for Health Affairs and Vice-Provost

Richard L. McCormick, Ph.D.,
Vice-Chancellor for Academic Affairs and Provost

Linda L. Spremulli, Ph.D.,
Interim Vice-Chancellor for Graduate Studies and Research

John Douglas Swofford, M.Ed.,
Director of Athletics

Wayne R. Jones, BA,
Vice-Chancellor, Business and Finance

Harold Gene Wallace, M.Div.,
Vice-Chancellor, University Affairs

The Planning Faculty

RICHARD N. L. ANDREWS Professor. Land Use and Environmental Planning. AB, Yale; MRP, Ph.D., North Carolina.

EDWARD M. BERGMAN Professor. Director, Institute for Economic Development. Economic Development. BS, Michigan State; MCP, Ph.D., Pennsylvania.

DAVID J. BROWER Research Professor. Associate Director, Center for Urban and Regional Studies. Land Use and Environmental Planning. BA, JD, Michigan.

GLENN CASSIDY Assistant Professor. Transportation, Infrastructure, and Government Finance. SB, Massachusetts Institute of Technology, MPA, Texas; Ph.D., Carnegie Mellon.

F. STUART CHAPIN, JR. Alumni Distinguished Professor Emeritus. B. Arch., MCP, Massachusetts Institute of Technology, AB, Minnesota.

DAVID R. GODSCHALK Professor. Land Use and Environmental Planning, AB, Dartmouth; B.Arch., Florida; MRP, Ph.D., North Carolina.

HARVEY A. GOLDSTEIN Professor. Director, Doctoral Program in Planning. Economic Development. BS, Columbia; MA, MCP, Ph.D., Pennsylvania.

JONATHAN B. HOWES Research Professor. Public Policy Program. AB, Wittenberg; MRP, North Carolina; MPA, Harvard.

MAYNARD M. HUFSCHMIDT Professor Emeritus. BS, Illinois; MPA, DPA, Harvard.

EDWARD J. KAISER Professor and Chair. Land Use and Environmental Planning. B.Arch., Illinois Institute of Technology; Ph.D., North Carolina.

LINDA LACEY Professor. Planning for Developing Areas. BA, California-Berkeley; MRP, Ph.D., Cornell.

MICHAEL I. LUGER Professor. Chairman, Public Policy Analysis Curriculum. Transportation, Infrastructure and Government Finance and Economic Development. AB, MPA, Princeton; MCP, Ph.D., California-Berkeley.

EMIL E. MALIZIA Professor and Associate Chair. Director, Master of Regional Planning Program. Housing, Real Estate and Community Development/Economic Development. BA, Rutgers; MRP, Ph.D., Cornell.

DAVID H. MOREAU Professor. Director, Water Resources Research Institute. Land Use and Environmental Planning/Transportation, Infrastructure, and Government Finance. BS, Mississippi State; MS, North Carolina State; MS, Ph.D., Harvard.

HELZI NOPONEN Assistant Professor. Planning for Developing Areas. BA, Temple; MCP, MA, Ph.D., California-Berkeley.

JOHN A. PARKER Professor Emeritus. B. Arch, M.Arch, MCP, Massachusetts Institute of Technology.

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Linda Drake, *Librarian*

Betty Geer, *Assistant Librarian*

Computer Laboratories

Bruce Egan, *Director*

Living in Chapel Hill

A university town of 38,000, Chapel Hill combines the advantages of a small community with the social and intellectual resources of the Research Triangle, which ranks first among the nation's 100 largest metropolitan centers for the number of Ph.D. scientists and engineers per 100,000 population. The Research Triangle includes state government in Raleigh, several universities in Raleigh and Durham, and research facilities at Research Triangle Park for major corporations and government agencies. Graduate students frequently participate in professional, cultural, and intellectual activities involving the three major universities in the area—UNC-Chapel Hill, Duke University, and North Carolina State University at Raleigh.

HOUSING

The University maintains housing for single graduate students in Craige Graduate Center, a six-story coeducational residence hall on South Campus. Craige has single and double rooms arranged by a suite system. Kitchens and lounges are located on each floor. Its other facilities include a laundry, game rooms, coffeehouse, snack bar, computer terminals, and seminar/study rooms. The University also operates apartments for student family housing in Odum Village, one mile south from the center of campus. Rents are modest, and early application is essential.

For more information, contact University Housing at 103A Carr Building, CB# 5500, UNC-Chapel Hill, Chapel Hill, NC 27599-5500, or telephone (919) 962-5406.

More information about off-campus housing can be obtained from The Village Advocate, P.O. Box 2145, Chapel Hill, N.C. 27515, telephone (919) 968-4801. The Village Advocate, a local publication distributed free within Chapel Hill, will send you a complimentary copy with listings of rooms, houses to rent, roommates, and apartments.

OTHER SERVICES

Many students dine at either Lenoir Hall near the center of campus or at Chase Hall on the southern edge of campus. A variety of restaurants are within walking distance of the residence halls and the main campus.

The University's Student Health Service offers medical and psychological services and maintains a well-appointed infirmary. Students who require specialized services may receive them at UNC Hospitals located on campus, at standard charges.

Students may use the University athletic facilities at little or no additional charge. These include indoor and outdoor swimming pools, tennis, handball and basketball courts, fields for softball and touch football, and an 18-hole golf course.

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Doctoral Program
Dr. Harvey A. Goldstein, *Director*

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Dr. Emil E. Malizia, *Coordinator*

Planning and Law
Dr. David A. Godschalk, *Coordinator*

Planning and Public Administration
Dr. Michael I. Luger, *Coordinator*

Specialization Curriculums

Economic Development
Dr. Edward M. Bergman, *Director*

Housing, Real Estate and Community Development
Dr. William Rohe, *Director*

Land Use and Environmental Planning
Dr. David R. Godschalk, *Director*

Transportation, Infrastructure, and Government Finance
Dr. Michael I. Luger, *Director*

Planning in Developing Areas
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Computer Laboratories
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Planning Library
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Frequently Called University Numbers

Cashier's Office (919) 962-1368

Financial Aid (919) 962-8396

Graduate School (919) 966-2611

Registrar's Office (919) 962-3954

Student Health Service (919) 966-2281

University Housing (919) 962-5406

Academic Calendar

ACADEMIC YEAR, 1993-94

	Fall Semester, 1993	Spring Semester, 1994
Semester Opens	Wed., Aug. 18	Tues., Jan. 4
Registration Begins	Wed., Aug. 18	Tues., Jan. 4
Orientation/Acad. Counseling	Sun., Aug. 22	
First Day of Classes	Wed., Aug.25	Mon., Jan. 10
Last Day for Late Registration	Tues., Aug. 31	Fri., Jan. 14
Holiday, Martin Luther King		Mon., Jan. 17
Holiday, Labor Day	Mon., Sept.6	
Holiday, University Day	Tues., Oct. 12	
Fall/Spring Recess Begins	Wed., Oct. 20, 5:00 PM	Fri., March 4, 5:00 PM
Instruction Resumes	Mon., Oct. 25, 8:00 AM	Mon., March 14, 8:00 AM
Thanksgiving Recess Begins	Wed., Nov. 24, 1:00 PM	
Instruction Resumes	Mon., Nov. 29, 8:00 AM	
Holiday, Good Friday		Fri., Apr. 1
Last Day of Classes	Thur., Dec.9	Wed., Apr. 27
Reading Day	Fri., Dec. 10	Thurs., Apr. 28
Final Examinations	Sat.-Sat., Dec. 11-18	Fri.-Fri., Apr. 29-May 6
Commencement		Sun., May 15

SUMMER SCHOOL, 1994

	First Session	Second Session
Registration Begins	Mon., May 16	Thurs., June 23
First Day of Classes	Thurs., May 19	Tues., June 28
Last Day for Late Registration	Fri., May 20	Wed., June 29
Holiday	Mon., May 30	
Holiday		Mon., July 4
Last Day of Classes	Tues., June 21	Fri., July 29
Reading Day	Wed., June 22	Sat., July 30
Final Examinations	Thu.-Fri., June 23-24	Mon.-Tue., Aug. 1-2

Some Summer School courses are offered on a different calendar. A list of longer and shorter courses with different starting and ending dates is included under the section Special Sessions in the Summer School catalog or the Directory of Classes.

ACADEMIC YEAR, 1994-95

	Fall Semester, 1994	Spring Semester, 1995
Semester Opens	Wed., Aug. 17	Thurs., Jan. 5
Orientation/Acad. Counseling	Sun., Aug. 21	
First Day of Classes	Wed., Aug. 24	Mon., Jan. 9
Last Day for Late Registration	Tues., Aug. 30	Fri., Jan. 13
Holiday, Martin Luther King		Mon., Jan. 16
Holiday, Labor Day	Mon., Sept. 5	
Fall/Spring Recess Begins	Wed., Sept. 28, 5:00 PM	Fri., March 3, 5:00 PM
Instruction Resumes	Mon., Oct. 3, 8:00 AM	Mon., March 13, 8:00 AM
University Day	Wed., Oct. 12	
Thanksgiving Recess Begins	Wed., Nov. 23, 1:00 PM	
Instruction Resumes	Mon., Nov. 28, 8:00 AM	
Holiday, Good Friday		Fri., April 14
Last Day of Classes	Wed., Dec. 7	Wed., April 26
Reading Day	Thurs., Dec. 8	Thurs., April 27
Reading Day	Fri., Dec. 9	Fri., April 28
Final Examinations	Sat.-Sat., Dec. 10-17	Sat.-Sat., Apr. 29-May 6
Commencement		Sun., May 14

This publication has been produced on the occasion of The University of North Carolina at Chapel Hill's Bicentennial Observance, celebrated from October 1993 to May 1994. This anniversary commemorates the birth of public higher education in the United States.

Designed by UNC-Chapel Hill Design Services.
Photography by Dan Sears of UNC-Chapel Hill's News Services, and David Minton.

Although the publisher of this bulletin has made every reasonable effort to attain factual accuracy herein, no responsibility is assumed for editorial, clerical, or printing errors or errors occasioned by mistakes. The publisher has attempted to present information which, at the time of preparation for printing, most accurately describes the course offerings, faculty listings, policies, procedures, regulations, and requirements of the University. However, it does not establish contractual relationships. The University reserves the right to alter or change any statement contained herein without prior notice.

Published by The University of North Carolina at Chapel Hill,Chapel Hill, NC
Send All Undeliverable Copies and Changes of Address to
The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599

5,500 copies of this public document were printed at a cost of $9,626.00, $1.75 per copy.

Statement on Equal Educational Opportunity
The University of North Carolina at Chapel Hill is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, sex, age, or disability. Any complaints alleging failure of this institution to follow this policy should be brought to the attention of the Assistant to the Chancellor. Moreover, The University of North Carolina at Chapel Hill is open to people of all races and actively seeks to promote integration by recruiting and enrolling a larger number of black students.

Policy on Nondiscrimination
It is the policy of The University of North Carolina at Chapel Hill that educational and employment decisions should be based on individuals' abilities and qualifications and should not be based on irrelevant factors or personal characteristics that have no connection with academic abilities or job performance. Among the traditional factors which are generally "irrelevant" are race, sex, religion, and national origin. It is the policy of The University of North Carolina at Chapel Hill that an individual's sexual orientation be treated in the same manner. This policy prohibiting discrimination on the basis of sexual orientation does not apply to the University's relationship with outside organizations, including the federal government, the military, ROTC, and private employers.

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School of Nursing

University of

North Carolina at

Chapel Hill

1993-94 Record

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Important Addresses/Phone Numbers Inside Back Cover

Cynthia M. Freund, PhD, RN, FAAN, Dean

At the University of North Carolina at Chapel Hill School of Nursing, our programs of study are designed to prepare you for the present and expand your vision of the future.

As we approach the 21st century, health care will continue to be a national issue, with nurses playing an increasingly important role in a reformed health care system.

Enrolling in an undergraduate nursing program is a first step toward taking your part in that future and the beginning of a career that can bring lifelong satisfaction. Nursing provides intellectual challenge and stimulation, a potential for growth and advancement, job security, and many opportunities for change and diversity.

At UNC-Chapel Hill, you will learn from professors who are nationally known for their work and accomplishments in the nursing field. You will practice nursing in different types of health care agencies, allowing you to see the many ways nurses provide health services. And you will study in a school that will give you experiences that go far beyond the classroom.

For registered nurses returning for a baccalaureate degree, the RN-BSN Completion Program acknowledges, respects and builds on previous education and experiences. It is designed to provide the foundation for advancement in the profession, as well as to prepare nurses for changing roles in a reformed health care system.

As you read about our School and our programs, we think you'll understand why we're so proud of what we have accomplished and what we have to offer our students. Our programs and extracurricular activities, combined with the faculty and students who bring life to the school, provide a rich environment for learning and growth. We hope you'll enjoy finding out more about our School.

Why Nursing?

Because you can make a difference.

Not only in the lives of your patients, but in the future of health care in our nation.

Excellent nursing care can make the difference between life and death to the sick and injured. But nursing also makes a difference in the healthy. You could be the nurse who finds a lump of cancerous cells before they spread through your patient's body, or the nurse who teaches teenagers how to protect themselves from AIDS.

As a nurse, you could choose a career as a researcher at a pharmaceutical company, finding out how drugs affect people's lives, or working in a rural area to provide prenatal care. You could even be the professor who teaches future nurses how to do all these things.

You could also change the health care system. Policymakers are turning to nurses for advice on how to make our health care system work better. As a nurse, you'll have a part in answering the question of how the nation can provide access to affordable, high quality health care. If you choose, you could have an impact on the nursing and health care professions, as well as on the lives of individuals.

Because you'll always have a job.

From now until the year 2005, the number of college graduates is predicted to be 20 percent greater than the number of available jobs. In contrast, the demand for nurses continues to grow. In fact, job opportunities for nurses are expected to grow at twice the rate of most other fields in the next ten years.

To quote a recent newspaper article, "In this year's recruiting season for college graduates, nurses are hot, but aerospace engineers are not." The article ranked nursing first in salary growth in 1993 with an average starting salary of $31,732.

UNC-Chapel Hill School of Nursing graduates have a 100 percent job-placement rate, with most of our students receiving job offers before graduation. Even students who have already earned degrees in other fields are returning to school to get one in nursing. Nationwide, enrollment of students seeking second degrees in nursing has increased by 28 percent.

Nursing not only gives you the flexibility to work in a variety of health care settings, it gives you the option of working almost anywhere in the country.

It gives you the opportunity to work with people from all social and ethnic backgrounds. Diversity is an asset in nursing. If you're bilingual or from another culture or geographic region, you could use your talents and unique perspective to work with children in South America, teenagers in the inner city of New York, or in a health care facility wherever you call home.

You have the power to shape your career to match your interests, whether it's working with premature infants in a neonatal intensive care unit, giving someone a new chance at life with heart transplantation, or helping people stay healthy.

Because it's a challenge.

Nursing is different every day, with every patient. You can use your nursing degree to become highly specialized, or to be a generalist. You can work in a variety of settings, from hospitals to public schools to community clinics.

Technological and scientific advances are helping people survive who would not have had a chance just ten years ago. But these advances, along with complex health care policies, make health care more challenging than ever before.

For some incurable diseases, excellent care is sometimes the only thing health professionals have to give. Increasingly, it's nurses who manage that care from the time the patient enters the health facility until well after they're home. Care management can involve almost any aspect of care, from scheduling physical therapy to recommending a counselor for a grieving family.

One of the greatest challenges, and one of the most rewarding services nurses provide, is health education — promoting health and teaching people to prevent disease. Nurses and all health professionals know that it costs far less, in life and in dollars, to prevent health problems than to treat them.

Why a bachelor of science degree in nursing?

Because the BSN degree is your basis for success in the nursing profession.

More and more men and women who earned their registered nursing licensure through hospital or community college programs are returning to get their baccalaureate degrees, and are earning more independence and opportunity.

Increasingly, hospital administrators say that the BSN is the preferred degree for the nurses they hire. Federal officials predict a shortage of baccalaureate-prepared nurses in all areas by the year 2000, and there are shortages now in certain regions.

Because the BSN degree gives you more opportunities.

You will have more independence, more flexibility, and a higher salary. With two years of nursing and two years of liberal arts education, you will be a better educated nurse, and a better educated person. You will be prepared to work in many different fields and settings and ready to take on positions of leadership at your job and in your profession.

Why the University of North Carolina at Chapel Hill?

Because we're ranked among the top two percent of nursing schools in the country.

We offer the resources of a major university, but we're able to give you the personal attention you need.

Our faculty are world-renowned, and so are many of our graduates. We're the largest single supplier of registered nurses to the state of North Carolina, and in the history of the School, 99.6 percent of our students have passed the licensure exam to become registered nurses.

Our undergraduate curriculum is tailored to meet the needs of nurses in the 90s and beyond. And for registered nurses returning for a BSN, our classes provide the chance to make strong skills even stronger.

So, why a BSN in nursing at UNC-Chapel Hill?

Because not only will you make a difference in people's lives, nursing will make a difference in yours.

The UNC-Chapel Hill School of Nursing

Until 1950, only hospital training programs existed to train nurses in North Carolina. Student nurses staffed hospitals in exchange for their training. They provided the hospital with a cheap source of labor, often at the expense of their education.

Most of the programs were not accredited, and many students could not pass the state nursing board examinations at the end of their training.

The creation of the UNC-Chapel Hill School of Nursing in 1950 marked the commitment of the state to provide nurses with a baccalaureate education. It led the way in ensuring that nurses' technical training was combined with a solid liberal arts and sciences background.

The School has been at the forefront of the evolution of the nursing profession since 1951, when the state's first four-year baccalaureate program in nursing began under the leadership of Dean Elizabeth Kemble. The class, consisting of 16 women, was also the first group of women to graduate from UNC-Chapel Hill with a four-year degree. That class graduated in 1955, the same year the program was accredited by the National League for Nursing. It has been reaccredited every year since.

The master's program, also the first in North Carolina, began in 1955. The program prepares leaders in nursing, providing graduate students with the opportunity to focus on specific advanced practice areas in primary care nursing, psychiatric-mental health nursing, neonatal/pediatric nursing, adult health nursing (with subspecialties in gerontological, critical care, and oncology nursing), women's health nursing and nursing management.

The continuing education program was established in 1964 and now reaches more than 3,000 nurses with over 100 different courses each year. The programs are designed to bring the latest knowledge and perspectives on health care to practicing nurses.

The School's doctoral program in nursing, which began in 1989, is the only program of its kind in the state. It focuses on human responses in illness, health promotion and health protection, and nursing systems. Graduates of the PhD program will be prepared to conduct research, prevent disease, promote health, improve nursing care, and teach others to do the same.

Founded to improve health education and health care, the School has fulfilled this mission in every year of its existence. More than 4,000 students have graduated since 1955 and are working to provide outstanding nursing care all over the nation.

"The focus of medicine is treating illness. The focus of nursing is to know the person with that illness, to know who their family is and to help them in a way that fits with their uniqueness."

New Challenges

Change is the only certainty as the School enters its next decade, especially change in the health care system. Beyond issues of access, quality and cost lie other challenges for the nursing profession. The growing elderly population, high infant mortality, teenage pregnancy and the AIDS epidemic bring with them the need for new approaches.

Not only are more patients seeking outpatient care to escape the high cost of hospitalization, but those in the hospital are more acutely ill, often requiring complex treatment.

Today, patients are discharged from hospitals earlier than ever before, many still depend on medical technology and need care at home. Terminally ill patients return home as well, often to home health and hospice care.

More nurses will be needed with the strong scientific and technological base that the School can give them. Graduates will be prepared to treat the increasingly complex problems of a diverse population, in all types of health care settings.

Preparing Nurses For the Future

The School's programs prepare students to give, manage and direct complex care in any setting, from a hospital to a helicopter, to schools and work sites, by emphasizing compassion as well as competence.

Robert Reed

"I didn't realize what I wanted ta da was right under my nase — my parents are bath in nursing. What they were daing was just what I was laaking far."

Rabert, a seniar, enjays the interactian he gets fram warking with peaple as a care giver. "Thraugh my clinical experiences, I get expasure ta peaple in the cammunity. I've been able ta help same peaple there a lat, and that's rewarding."

Rabert is nat anly a full-time student, he warks 40 hours a week in a medical intensive care unit and is alsa a full-time husband and father. He jakes that he's fast becaming an expert in time management.

But he says his hard wark has definitely paid aff.

Rabert transferred from N.C. State with a basis in physialagy and pathalagy, ta pursue a degree in nursing at Caralina.

He says the nursing pragram at Caralina has prepared him well far a career in nursing. "Na matter what field in nursing I might want ta ga inta, Caralina's given me a gaad, salid backgraund."

LaTanya Williams

Seniar LaTanya Williams wears a lat af hats.

And the next ane she'll wear will be at her graduatian.

As a resident assistant (RA) far Marrisan Darm, the president af the Schaal's Minarity Nurses Assaciatian, the treasurer af the Black Greek Cauncil, the secretary af her sarority, and a full-time nursing student —- she has still managed ta make the Dean's List and be selected far membership in the nursing hanar saciety, Sigma Theta Tau.

To her, nursing is nat samething she daes just when she's in class; it's a way af life.

As an RA she came up with the idea far laminated fliers that hang in the shawers af Marrisan, alerting her residents ta the dangers af breast and testicular cancer. The fliers shaw haw ta perfarm self-examinations, helping them start habits that might save their lives.

"With knawledge cames a lat af respansibility," she says. "Educatian means nathing if yau're nat gaing ta use it ta help ather peaple. When yau're in a health prafessian, yau became a resaurce ta athers, whether yau want ta be ar nat. If I'm anly helping deal with the prablem while I'm in clinical, I'm nat daing my jab. Nursing means helping peaple whether they're sick ar well."

Chris Coley

RN-BSN Completion Program

Chris Coley, RN, has a diploma from a three-year hospital program and a successful career as a Senior Associate Nurse Consultant for the accounting firm Coopers and Lybrand.

It's a job with a lot of responsibility, a lot of satisfaction and one that didn't require a BSN degree. So why did Chris come back to earn one after 18 years in nursing?

Chris says she never encountered roadblocks to success because she stayed within one company. Her promotions were based on the fact that she did outstanding work, was aggressive and always sought to continue her education through workshops and meetings.

But there came a time when she thought about looking for a new job and didn't want to deal with having doors shut in her face — not because she didn't have the professional experience — but because she didn't have a certain type of degree.

"Some employers won't look at the type of work you've done. They just pick up your resumé, see 'diploma grad' and put it right back down. I didn't want anything to restrict my access to other positions and job opportunities, so I started looking into getting a BSN."

After interviewing with several schools, she chose Carolina. "I decided that if I was going to take my time and money I wanted to go to a program that would be a challenge, one that would truly benefit me as a professional and not just meet the requirements of the BSN. I chose Carolina because I wanted to feel like people would see my degree and understand that I worked very hard for it, that it wasn't just a piece of paper."

Carol Durham

MSN, RN
Skills Lab Coordinator

"The skills lab is the most crucial component of the curriculum for undergraduates, it's the foundation for what they will do as nurses. In the skills lab they first begin to transfer the classroom experience into practice. It provides a safe haven in which to try things for the first time, to make mistakes and to ask questions," says Carol Durham, RN, MSN, skills lab coordinator.

Each junior nursing student spends three hours a week in skills lab, practicing the skills that they learn every day in the classroom. Students learn in small groups. The instructor spends two hours in the group explaining procedures, and an hour individuolly making sure each student has mastered it.

The lab is equipped with the medical equipment students will work with when they go into clinical settings. The difference is that in skills lab, the patients are mannequins that allow endless practice with injections, tracheotomies, CPR and many other procedures.

Students learn how to care for patients by role modeling, by receiving care themselves, and by thinking through hypothetical situations, Durham says. "It's a friendly place, where the instructors are very supportive of the students. They are genuinely concerned about the students' well-being in and outside of School. Feeling safe in skills lab is very important, because it's here that you learn the fundamental skills that you will rely on throughout your nursing experience."

The School's undergraduate curriculum uses computer-assisted instruction and interactive video disk learning. It merges the knowledge, philosophy and ethics of nursing with the technical skills needed today. It gives students a solid background on which to enter the profession and to pursue further education.

The School's RN to BSN program gives registered nurses a chance to expand their current opportunities. The curriculum is tailored to meet the needs of adult learners who already bring with them a high degree of expertise and skill. It provides theory-based content, teaches critical thinking skills, and is designed to strengthen the knowledge of nurses already in practice.

After a year of practice, graduates with a baccalaureate degree can further their education with a master's degree. The program offers advanced practice areas tailored to trends in health care. It gives students the knowledge to meet new demands in traditional fields and to tackle the problems of the future.

Going Beyond the Classroom, Access to the Future

Half of the School's undergraduates are between the ages of 25 and 35, and many are returning for a second bachelor's degree. More than 80 percent of students work while attending school. The changing demographics of the student body are indicative of the future of schools of nursing, and of health care. Diversity of student backgrounds and work experience enhance the profession. In recognition of this fact, the School fosters diversity in the classroom and gives students opportunities to learn outside of Chapel Hill.

The School is expanding program offerings in North Carolina, providing classes in Fayetteville and soon in Wake County, Smithfield and Asheville.

The School also takes programs to people by teleconference, allowing faculty to reach across the state and nation to share their nursing expertise.

"The skills lab is the most crucial component of the curriculum for undergraduates, it's the foundation for what they will do as nurses. In the skills lab they first begin to transfer the classroom experience into practice. It provides a safe haven in which to try things for the first time, to make mistakes and to ask questions."

Practicing What We Teach

The philosophy running through all the School's programs is that nursing is primarily a practice discipline. Behind many hours in the classroom lie many hours in the skills lab practicing nursing techniques — and many hours administering care to patients.

Nursing faculty coordinate and supervise that care every step of the way. In the course of each year, as the School provides a quality nursing education, faculty and students also provide care for about 8,000 hospital patients, 3,500 families in county health departments and more than 400 public school students.

Many students and faculty volunteer their services by participating in a student-run, faculty-supervised community clinic open one night each week. The clinic offers free nursing, medical and dental care that many of their patients would not otherwise receive.

"The Southern Part of Heaven"

The University of North Carolina at Chapel Hill

The University of North Carolina at Chapel Hill has been on the forefront of education since its opening in 1795 as the nation's first state university.

Today, as Carolina approaches its bicentennial, it has become one of the nation's leading universities, renown for its liberal arts education, professional schools, specialized research, and public service programs. The School of Nursing, although relatively young, shares the preeminence of other schools and departments that have been a part of the University since its earliest days.

In addition to its programs in nursing, Carolina enrolls more than 22,000 students in:

- 14 colleges and schools providing instruction in more than 100 fields
- 67 bachelor's degree programs
- 88 master's degree programs
- 61 doctoral degree programs
- Professional degree programs in dentistry, medicine, pharmacy and public health

Adult and Geriatric Health

Bonnie Angel, MSN
Donold Boiley, MN
Corol Boker, PhD
Chyrise Brodley, MSN
Lynne Brophy, MSN
Lindo Brown, MSN
Potricio Brown, PhD
Eleonor Browning, MSN
Shelio Bryont, MSN
Borboro Bunker, MSN
Morgoret Compbell, MSN
Jo Ann Dolton, EdD
Mory Dowe, EdD
Morgery Duffey, PhD
Corol Durhom, MSN
Julie Fleury, PhD
Borboro Germino, PhD
Joonne Horrell, PhD
Corol Hogue, PhD
Morgoret Hudson, PhD
Jone Koufmon, MSN
Deboroh Lekon-Rutledge, MSN
Shirley Moson, MS
Joellyn McCrory, MSN
Judith Miller, PhD
Merle Mishel, PhD
Virginio Neelon, PhD
Eleonor Toggort, MSN
Deboroh Thompson, EdD
Ellen Tim, MSN

Community and Mental Health

Corolyn Cooper, PhD
Lourel Archer Copp, PhD
Beverly Ferreiro, PhD
Anne Fishel, PhD
Beverly Foster, PhD
Jeon Goeppinger, PhD
Lorno H. Horris, PhD
Annie Hoyes, MS
Elizobeth Monley, MSN
Shirley Moson, MS
Jonet Morton, MA
Helen Murphy, MSN
Borboro Nettles-Corlson, MPH
Rondolph Rosch, PhD
Bonnie Rogers, DrPH
Borboro Rynerson, MSN
Mory Spencer, MSN
Ingrid Swenson, DrPH
Priscillo Ulin, PhD

When students arrive in Chapel Hill, they discover a campus conducive to learning and living. The beauty of the 687-acre central campus is seductive — regularly converting visitor to resident. Ancient oaks and eclectic architecture are laced together by miles of brick walkways and rock walls, all within an easy stroll of a charming downtown. Author Richard Moll, in his guide to the best U.S. colleges and universities, called Chapel Hill, "the perfect college town."

Although it still calls itself a town, Chapel Hill is a bustling community of 38,000 people in central North Carolina. Its four distinct seasons are a bonus that has inspired some to refer to it as, "The Southern Part of Heaven." Its winters are short and mild, with temperatures averaging 40 degrees. Winters may bring snow, but shorts and T-shirts are the fashion from late spring to early autumn.

Because of its proximity to the state capital of Raleigh and other educational institutions, Chapel Hill offers stimulating intellectual and cultural events, from art to music to drama. And sports fans can revel in Atlantic Coast Conference competition.

The town has yielded many success stories, such as musician James Taylor, clothing designer Alexander Julian and basketball superstar Michael Jordan.

Chapel Hill has been enriched in recent years by the growth of Research Triangle Park, 12 miles east of town. This state-sponsored research center has attracted scientists, engineers and other professionals who add to the diversity of the area. Raleigh-Durham International Airport is also located nearby.

For School of Nursing students, the University of North Carolina Hospitals, located next door to the School of Nursing, offers excellent clinical experience for undergraduates and flexible, part-time and full-time employment opportunities for registered nurses enrolled in the School.

The Departments

The School's faculty are organized into four academic departments:

Adult and Geriatric Health

Community and Mental Health

Social and Administrative Systems

Health of Women and Children

Adult and Geriatric Health
Chair, Barbara Germino, RN, PhD, FAAN
With the number of American citizens over 60 projected to double by 2050, and with average life expectancy on the rise, the demand for nurses

"Minorities have a special strength. Society insists that you are unique, so you are — that's where the strength comes from. It's how you use that strength that makes a difference. The Office of Minority Affairs is a place at the School that teaches you how to use that strength to your advantage."

familiar with the special needs of elderly persons is expected to increase dramatically. Already there is a predicted shortage in this field.

There has always been a need for nurses to deal with short term illnesses, but the major health problems for adults today, cancer and cardiovascular diseases, have also created the need for nurses skilled in helping patients and their families cope with the problems of living with a chronic illness or disease.

At the baccalaureate level, students in adult and geriatric health will aquire the clinical skills and the knowledge they'll need to plan, provide and evaluate the care of adults and elderly persons with a variety of acute and chronic illnesses. Students will also learn how to prevent illness and promote health in this population.

With shorter hospital stays and more services occurring outside of the acute care setting, clinical experiences in adult and geriatric health take place in a wide range of settings, including acute and critical care units in hospitals and medical centers, in the home, in long-term care and rehabilitative facilities, and in outpatient clinics.

Classes will prepare students to use principles of scientific inquiry and require them to draw heavily on their science and humanities knowledge. They will gain experience collaborating with other health care professionals in helping patients and families

Dessie Bauzon

Senior Dessie Bauzon wos having a hord time deciding what to do with her biology degree from UNC-CH. "Before I decided on nursing I looked ot everything — even occounting," she soys.

"I groduated in '91 knowing thot I didn't wont to spend all my time in o lob because there aren't ony people there. I considered nursing ond found out I liked it — it's helping people help themselves."

After groduotion Dessie will work ot the UNC Memoriol Hospitol Burn Center. She chose the Burn Center becouse she wos impressed by the stoff ond the scope of care they provide their potients. They treot the whole person, not just the burn, she says, offering counseling for the potient and their fomilies, physicol therapy, ond much more.

Dessie is pretty impressive herself. She volunteers os co-nursing coordinator at the Student Health Action Committee Clinic (SHAC). She and another nursing student oct os nursing administrators for this community clinic that is student stoffed ond operated.

At SHAC, nursing students work with students in dentistry, medicine, pharmocy ond heolth policy to provide care for onyone who needs it. This gives students o chonce to experience all ospects of core and work with peaple in the community.

"Once I got into SHAC, I was able to odvertise nursing's profession ol image to the community ond to medical students," Dessie says. "Some of our potients wouldn't receive care unless they received it from SHAC. I enjoy helping people who need it, and I'm also able to use some odministrotion skills that I knaw I'll need later in my nursing coreer."

Beverly Foster

MN, MPH, RN, PhD

Beverly Foster recently received her doctorote fram the UNC-CH School of Educotian. She's also o profesor ot the School of Nursing. Her dissertotian wos an the effects of teleconferencing as a means of instruction. Now she's taking what she's learned ond putting it to use in the clossraam.

"Interoctive teleconferencing ollows us to connect people across the borrier of distonce to think, plan and learn together. I loak at it os onather resaurce in teaching. It gives students access to courses thot oren't offered at their schools ond allows us to take educotion to people, instead af moking them come to it."

She's educoting her students about how to use teleconferencing ond other technologies os onother way to learn. She's olso investigating ways to opply whot's she's learned ot the School.

All this is o port of her style of teaching. She sees it os an appartunity ta help students discaver information for themselves ond to learn for themselves. "My role is as a facilitotor of their nursing experience. I archestrate ond manage the pieces af their educotian. I try to teoch in o way that fosters independence. Students should learn how to leorn. They must acquire the obility to find and use information and people as resources. But above oll, they should recognize that learning definitely doesn't end with graduotion."

And with telecanferencing, her students realize that their link ta Caralina and leorning apportunities doesn't require a troditional clossraom.

Bonnie Angel

RN, MSN
Academic Counselor

Ever wish you had a guardian "angel" to watch over your academics? Bonnie Angel, RN, MSN is about as close as you'll come.

She offers individualized counseling and advising for students who feel they could use help with a specific course or with study skills in general. She provides sessions in mastery of textbook comprehension, test-taking strategies, stress reduction and time management techniques. To prepare for the state licensing exam that all students must take to become registered nurses, she offers special review sessions on Pharmacology and Adult Health Nursing. Angel also administers a licensure exam practice test to all seniors in their last semester. Based on the results of that test, she sets up an individualized study plan for any student in need of extra assistance.

"What I do is very rewarding and I'm proud of the success of the students who have used the service I provide," says Angel. "I get fulfillment out of interacting with students and helping them excel academically. So far, we're the only School that has this program, but as we continue to be the single largest supplier of registered nurses to the state, other schools are beginning to take notice."

"Professor Angel is great," says senior Whitney Doiron. "She's always been there for me, and she's there for the School. Not only is she the adviser for our Student Nurses Association, she's the faculty representative on the Alumni Board, she's working on her EdD — in addition to her teaching responsibilities, and still her door is open for students who are having problems. She's an important role model for us. It would be hard to find anyone better to talk to if you're having problems [illegible]." says Doiron.

Lorna Harris

RN, PhD
Director, Office of Minority Affairs

"Most of the problems minority students experience aren't very different from those of any student on campus," says Dr. Lorna Harris, director of the School's Office of Minority Affairs. "Problems such as dealing with a roommate, learning how to communicate needs, how to cope with social isolation, and questions of how to juggle work and school are common. It's the added stress of being considered, or feeling 'different,' that can make little problems turn into big ones," she says.

The Office was designed to aid in the recruitment and retention of minority faculty, staff, and students at the School. For the School of Nursing, that means not only cultivating ethnic and cultural diversity, but also gender diversity.

The office provides programs such as a peer support group, interview and job skills workshops for students, and a mentoring program that links students to successful nursing professionals. Dr. Harris says the programs have helped provide an atmosphere that recognizes the importance of diversity and has led to the creation of UNC-Chapel Hill Association of Minority Nursing Students.

"Minorities have a special strength," says Afshin Meymandi, a recent graduate and a participant in the mentoring program. "Society insists that you are unique, so you are — that's where the strength comes from. It's how you use that strength that makes a difference. The Office of Minority Affairs is a place at the School that teaches you how to use that strength to your advantage," he says.

"We want to make sure our students are prepared to take care of patients wherever the patients are, not just in a hospital setting, but in the home, in the community... They are exposed to patients with high tech needs, and are taught in a way that allows them to transfer those skills to wherever the patients are."

deal with health related problems, and participate in developing nursing policies and setting standards of nursing care.

Community and Mental Health
Chair, Jean Goeppinger, RN, PhD, FAAN

The rising cost of health care has led more patients to seek care outside of hospitals and many state facilities can only afford to care for the most acutely ill patients. Community clinics are relied on to care for less seriously ill patients. This trend has led to an increasing demand for nurses equipped to care for the large number of mentally and physically ill patients in our communities.

In addition, the high cost of treating preventable diseases has led to an emphasis on stopping health problems before they start. Nurses who can bring health education and primary care to groups on a local level are in high demand.

Courses in community health nursing teach students to identify and manage the health needs of individuals, families, and groups in community settings. Students learn to provide health education, health screening and health promotion services to clients in high risk groups and provide individual care to clients with acute and chronic illnesses.

Classes in psychiatric nursing prepare students at a beginning level to help clients and families experiencing emotional problems and/or mental illnesses. Students learn treatment methods and ways of caring for persons in the home, community, or psychiatric-care setting.

Clinical experiences for both fields of practice take place in public health departments, home health agencies, schools, health clinics, public residential

housing projects, state and private hospitals, community mental health centers, and private homes.

Social and Administrative Systems
Acting Chair, Patricia A. Lawrence, RN, MA

Nurses with baccalaureate degrees are highly sought after as leaders in their field. Classes in the department of Social and Administrative Systems provide nurses with the knowledge and skills that will allow them to fufill their roles as managers of patient care and as leaders in the health care setting. They will also be equipped to take that leadership outside of the clinical settings to positions of leadership in health care reform and professional organizations.

To do this effectively, students must know about the current health care system and its problems from a national, state, and local perspective. Students must also have a grasp of the whole picture and an idea of their own place within a larger organization.

Courses in nursing issues and leadership equip undergraduate nurses with skills they will need in their first jobs: communication in complex organizations, leadership styles, conflict management and political strategies, to name a few. Faculty seek to teach students not only how to survive professionally, but how to thrive in their profession.

Health of Women and Children
Chair, Margaret S. Miles, RN, PhD, FAAN

In America today, when we talk about meeting the health care needs of the poor and the underserved, we are talking about women and children — because they make up the majority of this group. Nurses must have a strong background in the care of this population in order to meet the health care demands of the future. The Health of Women and Children Department will prepare students to provide excellent health care to women, infants, children, adolescents, and their families in a variety of settings.

In the maternity course, students work with pregnant women and their families in ambulatory settings and in the hospital. They assist women and their families during labor and birth and learn about the special needs of newborn infants. They experience the rewards of helping families challenged by the birth and care of their newborn child. In addition, they learn to provide sex education and family planning to women and their partners, to prevent and treat sexually transmitted diseases, to assess and cope with substance abuse in pregnant women and their families and to learn how health problems in women and infants are prevented by quality prenatal care.

In the pediatric course, students work with children and teenagers in a variety of settings. In clinical settings, they learn about preventive health care, developmental assessment and the treatment of common and chronic health problems. In the hospital setting, they learn to provide care to infants, children and teenagers hospitalized for surgery, acute illness, chronic conditions, and terminal illness. Family centered care is emphasized as students learn to work with parents, siblings, grandparents and others who are coping with the child's illness.

Health of Women and Children

Kathryn Alden, MSN
Michael Belyea, PhD
Susan Brunssen, MSN
Becky Christian, PhD
Jennifer D'Auria, PhD
Virginia Davis, EdD
Dustine Dix, MS
Catherine Ingram-Fagel, PhD
Annette Frauman, PhD
Betty G. Harris, PhD
Suzanne Herman, MSN
Diane Halditch-Davis, PhD
Cathee Huber, MSN
Caral Lee Jahnstan, MSN
Maureen Kelly, MS
Deitra Lawdermilk, PhD
Margaret S. Miles, PhD
Judy Marraw, PhD
Margarete Sandelawski, PhD

Social and Administrative Systems

Jahn Carlsan, MS
Patricia Claanan, PhD
Mary Dawe, EdD
Sheila Englebardt, PhD
Cynthia Freund, PhD
Sandra Funk, PhD
Edward Hallaran, PhD
Patricia Lawrence, MA
Wendy Lin, PhD
Mary Lynn, PhD
Nancy Milia, PhD
Mary Ann Peter, PhD
Susan Pierce, PhD
Jaann Richards, PhD
Rachel Stevens, EdD
Elizabeth Tarnquist, MA
Elizabeth Waadard, MSN

Activities and Honors

Students in the School of Nursing participate in numerous campus activities and organizations. Additional activities are described in the Undergraduate and Graduate Bulletins in the sections on Student Activities.

Undergraduate Honors Program

The School of Nursing honors program recognizes undergraduate students who have demonstrated exceptional ability and potential for independent study in nursing. Junior students who have a 3.2 grade point average are invited to participate in senior honors. During their senior year, the honors student registers for independent study by enrolling in Nursing 97 and 98 and completing a paper or honors project by the end of the spring semester.

Nursing Honor Society Sigma Theta Tau

The Alpha Alpha Chapter of Sigma Theta Tau International, the honor society in nursing, was chartered at The University of North Carolina at Chapel Hill on October 5, 1962. The Society recognizes scholarship, leadership, creativity, and individual commitment to high standards. Invitations to membership are extended to selected students in the undergraduate and graduate program, faculty members, and graduate nurses with a baccalaureate or higher degree. The Society conducts programs and business meetings and gives awards in keeping with its purposes.

Association of Nursing Students (ANS)

The Association of Nursing Students (ANS) is the professional organization for student nurses. It operates on local, regional, state and national levels. Local and regional programs are provided during the year on various subjects of interest to nursing students. ANS also sponsors health projects that serve the community. ANS encourages students to become involved in legislative activities concerning health care, nursing education, and nursing practice. State and national annual conventions promote the development of nursing students as health professionals.

Association of Minority Nursing Students (AMNS)

Membership in the Association of Minority Nursing Students is open to any UNC-Chapel Hill nursing student interested in minority nursing education and health care issues. It serves to unite minority students within the School, to promote professional growth and development, and to deal with issues that impact minorities. Members participate in the minority mentor program and can act as peer advisers for freshmen and sophomores at the University who have declared nursing as a major.

"Teaching is a partnership," says Barbara Rynerson, MSN, "It engages the student in a process of being open-minded and exploratory in a way that allows them to expand their knowledge and gain experience. That way they can make effective choices, not only in relation to their profession, in caring for patients, but also in making personal choices about the difference they're going to make in their profession."

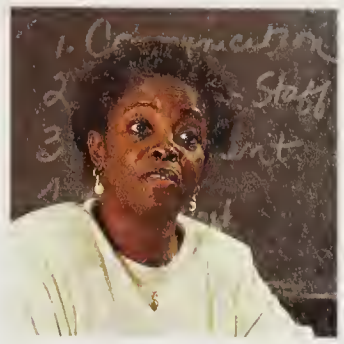
Student Health Action Committee (SHAC)
Students in the School of Nursing participate in the Student Health Action Committee, which is devoted to the improvement of health care and health education in Chapel Hill and surrounding areas. It is both an education and service-oriented group. Students from all schools of the division of Health Affairs may serve on the committee.

Faculty and students involved with SHAC volunteer their time at a community clinic that provides nursing, medical and dental care to clients free of charge. The clinic is open once a week and provides students with an opportunity to practice nursing skills, and gain personal satisfaction by helping the community.

Junior and Senior Board
Each year the junior class elects five students to serve on the Student Board for a two-year term. The Board functions as a representative body for the students and meets regularly with the Associate Dean of Undergraduate Studies. The members work on various projects and act on ideas and concerns shared by class members.

Resources

Office of Student Services
The Student Services Office of the School of Nursing is responsible for student recruitment, preadmission counseling, student admissions, registration and records, financial aid, enrolled student



Elizabeth Burkett
MSN

It has been said that if North Carolina is on the front lines of the fight against infant mortality, Elizabeth "Liz" Burkett is leading that fight.

The master's degree in nursing she received from UNC-Chapel Hill in 1975 has helped her in her journey from being a patient in the public health care system, to being a public health care practitioner. It allowed her to identify one of North Carolina's problems, an embarrassingly high infant mortality rate, and gave her the tools to begin to do something about it.

For the past 15 of her 26 years in nursing, Liz has been battling infant mortality under the title of Perinatal Outreach Education Coordinator at Duke University Medical Center.

Now, Liz travels thousands of miles each year to clinics in counties across North Carolina, working to improve and to orchestrate the state's prenatal care programs.

"I am fully aware of what people are going through, and now I'm in a position to help them," she says.

Through her efforts, there are five more health clinics — in the rural counties of Warren, Vance, Franklin, Granville, and Person — and 16 other prenatal coordinators in those rural counties than when she began her job. And all the counties have seen a decline in infant mortality rates — evidence of what nursing, and one very determined woman, can do.

Lisa and Teresa Mace

Teresa and Lisa are juniors who transferred together from a community college in western North Carolina. They are twins who live together, go places together, have most of their classes together, and study together.

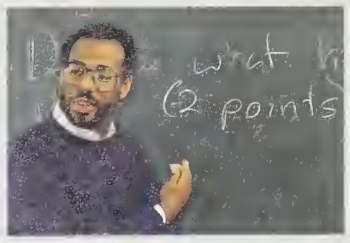
For them, nursing school is a challenge they have tackled like they've done almost everything else – together. But they wouldn't want it any other way.

They say the instructors who supervise their clinical rotations are outstanding, and help them to feel prepared for nursing practice. Classes are hard, but they expected that.

It was Carolina's reputation as a top quality nursing school that attracted the twins to Chapel Hill.

"I like knowing things about health to put it to practical use, not just to learn facts for a test. That knowledge is my reward," Teresa says.

They would both like to practice nursing in an emergency room or an intensive care unit. "We like the high-stress, fast-paced areas the best," Teresa says. "You have to be thinking all the time, it's very exciting."



Randolph Rasch

RN, PhD

"We tolk of nursing as o science and on art," soys Dr. Rondolph Rosch, ossociote professor in the deport-ment of community ond mentol health. "To become an ortist you learn certoin standards of whot it meons to be ortistic, but you don't leorn them to constroin you, you leorn them to give you more optians of self-expression. As o professor, I recognize that an individual hos things that they bring to nursing that are uniquely their awn. The challenge as educotors is how we con teoch the content of nursing, sociolize peaple into the discipline, ond still ollow them to express themselves in nursing, as on art."

Port of the way he daes it is by let-ting both his potients and his stu-dents be individuals. Everyone needs to travel an their awn poth, he soys. His job is ta ollow them to do thot, but make sure everyone gets ta the some point — excellence in nursing.

Dr. Rasch says he feels nursing pra-vided him with the best way to use his mind ta help people with healoth and illness. It's a profession in which each day you have to be cre-ative in odapting your knowledge and skills to changing circumstances. "The focus of medicine is treoting ill-ness. The focus of nursing is to know the persan with thot illness, ta knaw who their fomily is and to help them in o way thot fits with their uniqueness."

He chose community and mentol health nursing for the outonamy ond respansibilty it affers. He soys it gives the nurse more af an apportu-nity to get to knaw the patient os an individuol, and because you're on their turf, you see the person in con-text. And the better you knaw the patient, says Dr. Rasch, the more effective you can help them.

Deitra Lowdermilk

RN, PhD

Dr. Lowdermilk is the co-author of one of the tap two textbaaks for moternity nursing, ond she's o con-tributing outhor to the other.

"Everything I do in my writing and reseorch feeds into my role os o teocher," she soys. "I hove a responsibility ta keep up to date on moternity nursing, to know what's going an in the proctice setting ond to bring that knowledge inta the clossroom."

Through her textbooks, Dr. Lowdermilk reoches students oll aver the country. But she has olso brought knowledge from her reseorch ond practice into the UNC-Chopel Hill undergraduote curricu-lum, which she ond other faculty members helped design to meet the needs of future nurses.

"We wont to moke sure aur stu-dents ore prepored to toke core of patients wherever the patients ore, not just in o hospital setting, but in the home, in the community. We set up our clinical rotations to moke sure students get that kind of expe-rience. They ore exposed to potients with high tech needs, ond ore tought in a way that allaws them ta trans-fer thase skills to wherever the potients ore."

Dr. Lowdermilk soys thot oll her closses ore structured to encourage student independence and self-direction. She wants them to exom-ine their clinicol ond their personal experiences in depth. This is why her students ore required ta keep o jaurnol of their experiences in labor and delivery, and turn in o poper on whot it wos like to witness their first birth.

She soys thot critical thinking is probably the most importont port af nursing. "To develop thot, I try to be very apen ta students expressing their own apinians on things, I'm avoiloble ta listen to their problems, and within reasan, I encaurage them to do their awn thing."

"To become an artist you learn certain standards of what it means to be artistic, but you don't learn them to constrain you, you learn them to give you more options of self-expression. As a professor, I recognize that an individual has things that they bring to nursing that are uniquely their own. The challenge as educators is how we can teach the content of nursing, socialize people into the discipline, and still allow them to express themselves in nursing, as an art."

advising/counseling, and other enrolled student services. The staff work with a variety of individuals and offices both in the School of Nursing and campus-wide to carry out activities in these areas.

Office of Undergraduate Studies

The Office of Undergraduate Studies plans, develops and administers the undergraduate program. Its responsibilities include:

- Coordinating assistance to students who need a modified curriculum to enter/or proceed in the undergraduate program
- Directing the honors program
- Coordinating activities for academic counseling (see profile on the Academic Adviser)
- Planning and conducting student orientation
- Meeting regularly with the Student Board, student representatives from other organizations and individual students

The office is also responsible for establishing the class and clinical master schedule, planning and evaluating clinical sites, and participating in recruitment activities.

Office of Minority Affairs
The Office of Minority Affairs offers faculty and students guidance and support at the professional, academic and social levels. It offers an open, confidential environment for discussion and counseling on issues that may confront minority students as they move through the world of nursing education. It also seeks to establish a culturally sensitive and diverse atmosphere that will enhance the recruitment and retention of minority faculty and students.

Created in January of 1992 to address the need for ethnic and gender diversity in the School and in the nursing profession, the office has established links between minority students and minority mentors already at work in the health care environment. Mentors act as role models, as well as important links to career information. The office also coordinates additional support through existing on-campus programs.

Health Sciences Library
The Health Sciences Library is the primary library for the University of North Carolina Schools of Dentistry, Medicine, Nursing, Pharmacy and Public Health, and The University of North Carolina Hospitals. It also serves the health information needs of the entire University at Chapel Hill and health personnel throughout the state. The library has an excellent collection to support curricular, research and patient care information needs, consisting of approximately 250,000 volumes and 10,000 serial titles, of which over 3,400 are currently received. Information about the collection is accessible through the Triangle Research Libraries Network online catalog. The library building, completed in 1982, has seating for over 700 users. A large learning resources center includes a microcomputer learning center and a computerized teaching lab. Library users have free access to the open stack collections.

The library also provides photocopy services and an interlibrary loan service for materials which are not available on campus.

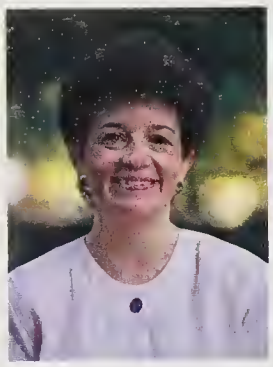
Housing

The University provides residence hall accommodations in 30 buildings for more than 7,200 registered students—undergraduate, graduate and professional men and women.

Assignments to University housing are made as applications are received. Application for housing does not guarantee assignment. Early application is advised.

For additional information about residence hall accommodations including contract responsibilities, cost, and application procedure, write: Department of University Housing, Contract Office, CB# 5500, Carr Building, The University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-5500.

The University provides 306 apartments for student family housing: 76 one-bedroom unfurnished apartments, 180 two-bedroom unfurnished apartments, and 50 two-bedroom furnished apartments. The apartments are located in Odum Village,



Deborah Thompson

RN, EdD

Coordinator, RN/BSN Program

"Teaching my RN students is the most rewarding thing that I do. It is also one of the most difficult, because these students ask hard questions and have the knowledge to challenge ideas. They use their own experiences. In the process they strengthen their nursing practice, and they grow individually and professionally."

which is one mile south of the center of campus. To be eligible for Student Family Housing, either spouse must be a registered full-time student. For further information about Student Family Housing, write to: Manager, UNC Student Family Housing, CB# 5510, Chapel Hill, NC 27599-5510.

Available housing is competitive in the Chapel Hill area. Tentative arrangements for housing should be made as soon as possible. The Student Consumer Action Union publishes a guide to apartment rentals in the Chapel Hill-Carrboro area. For a copy of this guide, "Southern Part of Heaven," write: Student Consumer Action Union, Suite B, CB# 5210, Carolina Union, Chapel Hill, NC 27599-5210.

University Services

The University offers many services and facilities for all students' use.

The Student Health Service provides reasonably priced comprehensive health care for all regularly enrolled students on a prepaid basis. Prevention as well as treatment of illness are prime objectives of the health service.

Students are encouraged to participate in the student insurance plan available through the University. This policy protects students against extraordinary expenses resulting from serious accidents or surgery requiring medical care beyond that provided by the Student Health Service. The low rate is possible because the policy is a group insurance plan. Specific information is given in the Undergraduate Bulletin.

Library facilities include the Robert B. House Undergraduate Library, the Walter R. Davis Library, and the Health Sciences Library, which provide more than 1.5 million volumes.

The student handbook describes University services in more detail.

Disability Services

Disability Services works with the University to make sure programs and facilities are accessible to all members of the University community. Staff work with students to develop individualized services that meet their needs. The services include:

- guidance in housing selection
- transportation and parking arrangements
- registration assistance
- academic support (note-takers, modified testing, recorded texts, library assistance, liaison with state rehabilition agencies)
- services for students with sensory impairments, mobility limitations, psychological disabilities and chronic medical conditions

For more information, call Disability Services at 966-4041.

Admission Procedures

Freshmen applicants to Chapel Hill

The high school graduate enters the General College as a freshman and transfers into the School of Nursing in the junior year. Admission of freshmen is handled by the Office of Undergraduate Admissions, but applicants may also request an interview in the School of Nursing. The University suggests that students take a strong college preparatory program in high school. This program should include honors and advanced placement courses if possible.

The following courses are the minimum requirements for admission:

In **English,** four course units emphasizing grammar, composition, and literature.

In **mathematics,** three course units including algebra I, algebra II, and geometry. Students are encouraged to take one math unit in the twelfth grade.

In **science**, three course units including:

- at least one unit in a life or biological science (for example, biology)
- at least one unit in a physical science (for example, physical science, chemistry, physics)
- at least one laboratory course

In **social studies,** two course units including one unit in U.S. history.

In a **foreign language,** at least two course units in one foreign language are required. Students are encouraged to take one foreign language unit in the twelfth grade.

"Course units" as defined in these requirements may include those high school level courses taken and passed by an applicant after graduating from high school, as well as those taken while enrolled as a high school student.

Additional information used in the admission process includes: application information, the Scholastic Aptitude Test, health records, scholastic records and personal references.

Freshman admission as a prenursing student does not guarantee admission to the nursing curriculum at the junior level.

Junior Level and Transfer Applicants

All students, including transfer students from the General College, transfer students from other schools and universities and students with baccalaureate degrees in other fields, apply for admission to the School of Nursing at the junior level. The first courses begin in the second summer session preceding the academic year.

Registered Nurse Applicants

The registered nurse applicant must successfully complete the general education (lower division) requirements listed on page 19 and meet the admission requirements listed on this page. Biology 11 is not required if the RN has already completed a course equivalent to Biology 45. These courses may be taken at another college or university and must be comparable to those offered at The University of North Carolina at Chapel Hill. Students should present at least a 2.0 grade point average (on a 4.0 scale) on all courses taken and be eligible to return to all previously attended institutions.

The registered nurse applicant must be licensed in North Carolina. For legal reasons, state licensure is required for students to have laboratory practice in clinical facilities. (For information on obtaining North Carolina registration, contact the North Carolina Board of Nursing, P.O. Box 2129, Raleigh, NC, 27602 or call (919) 828-0740).

In addition to the policies and regulations outlined on page 18, all registered nurses enrolled in the School must carry professional liability (malpractice) insurance coverage.

School of Nursing Admission Requirements

Admission requirements include:

- a minimum GPA of 2.0 on a 4.0 scale. Presenting the minimum GPA does not guarantee admission; competitive GPAs are often considerably higher.
- two references. At least one of these should be an academic reference, the other may be an employer reference.
- a minimum grade of C in Biology 45 (anatomy), Physiology 92, and Microbiology 55 or their equivalent.
- completion of all lower division requirements prior to enrolling in nursing courses (see page 19 for requirements).

The School of Nursing reserves the right to select applicants considered best qualified for the study of professional nursing.

Academic requirements for admission to the School of Nursing are subject to change.

As a State institution, the University accommodates limited numbers of out-of-state students. Admission to the School of Nursing as an out-of-state applicant is highly competitive.

Accreditation and Affiliations

The University of North Carolina at Chapel Hill is accredited by:

- The Southern Association of Colleges and Schools.
- The Collegiate Board of Review of the National League for Nursing (granted full accreditation of the undergraduate program in nursing in 1955, and accreditation of the graduate program in 1961. Both programs were reaccredited in 1970, 1978, and 1986).
- The North Carolina Board of Nursing.
- The American Nurses' Association National Accreditation Board for Continuing Education (granted accreditation of the Continuing Education Program in 1978 and reaccredited the program in 1982, 1986, and 1990).

And is a member of the following organizations:

- The National League for Nursing Council of Baccalaureate and Higher Degree Programs.
- The American Association of Universities.
- The American Association of Colleges of Nursing.
- The Southern Council on Collegiate Education for Nursing (Southern Regional Education Board).

The curriculum is divided into the components of **practice** and **context.**

The practice component emphasizes scientific and theoretical bases for nursing practice. It deals with the health care of the individual patient and the general delivery of nursing care. Basic knowledge in the practice area includes biological sciences, the research process, care management, nursing theory, nursing process and human needs and responses. Specialty knowledge in the practice area includes population-specific information about human development, risk status and specific health problems.

The context component emphasizes major issues in health care and the relationship of nursing to the health care delivery system as a whole. It addresses accountability, the role of the nurse, roles shared among nursing and other health professionals, the health care system, and other social systems.

Course Sequence

Nursing courses are ordinarily completed in the following sequence:

Junior Year

2nd Summer Session

NURS 51 Introduction to the Discipline of Nursing (3 credit hours)

NURS 52 Individual and Family Development Throughout the Life Span (3 credit hours)

Fall

NURS 56 Basic Skills and Theory for Clinical Practice (4 credit hours)

NURS 57 Pathophysiology (2 credit hours)

NURS 58 Pharmacology (2 credit hours)

NURS 59 Nursing Care of Patients with Major Adult Health Problems I (5 credit hours)

Spring

NURS 66 Health Assessment (3 credit hours)

(2 of the following 7-week courses)

NURS 71 Nursing Care of Infants and Children (5 credit hours)

NURS 73 Maternal/Newborn Nursing (5 credit hours)

NURS 74 Community Health Nursing (5 credit hours)

NURS 75 Nursing Care of Patients with Mental Health Problems (5 credit hours)

Senior Year

Summer

NURS 81 Care Management (3 credit hours) (with co-requisite work experience)

Fall

NURS 88 Introduction to Nursing Research (3 credit hours)

or

NURS 89 Leadership in Organizations (3 credit hours)

(2 of the following 7 week courses)

NURS 71 Nursing Care of Infants and Children (5 credit hours)

NURS 73 Maternal/Newborn Nursing (5 credit hours)

NURS 74 Community Health Nursing (5 credit hours)

NURS 75 Nursing Care of Patients with Mental Health Problems (5 credit hours)

Spring

NURS 88 Introduction to Nursing Research (3 credit hours)

or

NURS 89 Leadership in Organizations (3 credit hours)

NURS 92 The Nursing Profession in Today's Health Care System (3 credit hours)

NURS 93 Nursing Care of Patients with Major Adult Health Problems II (8 credit hours)

Course Descriptions: Practice Component

NURS 51 **Introduction to the Discipline of Nursing** (3 credit hours)

The course will introduce the student to concepts basic to the discipline and practice of nursing, including nursing, practice, critical thinking, care and the context of nursing. Summer. Cooper.

NURS 52 **Individual and Family Development Throughout the Life Span** (3 credit hours)

Using a lifespan approach, the course focuses on individual psychosocial and cognitive development, developmental milestones, physical growth, and risk prevalence from infancy through elder years and on family development. Summer. B. Harris

NURS 56 **Basic Skills and Theory for Clinical Practice** (4 credit hours)

The focus of the course is on development and application of basic nursing concepts and skills in classroom, laboratory and clinical settings. Fall. Angel.

NURS 57 **Pathophysiology** (2 credit hours)

The course is concerned with the disruption of normal physiology; the alterations and mechanisms involved in the disruption; the manifestations in disease and at risk conditions; and the pathophysiological principles underlying therapeutic interventions. The course will examine the pathophysiologic way things go wrong and the scientific and clinical rational underlying prevention, management, and recovery. Within each major focus, students will analyze and discuss the critical data, clinical cues, and the scientific rationale for therapy and intervention using a Pathophysiological Pathway Problem Model. Fall. Neelon.

NURS 58 **Pharmacology** (2 credit hours)

Using the science of pharmacology and pharmacologic principles underlying therapeutic interventions, the course focuses on the introduction to nursing responsibilities regarding pharmacologic therapy. Fall. Neelon.

NURS 59 **Nursing Care of Patients with Major Adult Health Problems I** (5 credit hours)

First level course in applying critical thinking skills to nursing care problems of adults with major health problems. Fall. Dalton.

NURS 66 **Health Assessment** (3 credit hours)

Concepts and methods of comprehensive health assessment of children, adults, and elders. Emphasis will be on data collection as a base for initiation of caring and decisionmaking in nursing practice. Spring. D'Auria.

NURS 71 **Nursing Care of Infants and Children** (5 credit hours)

The nursing care of children and their families is explored. Knowledge from a variety of disciplines is applied through the nursing process to the direct care of infants and children. Fall, Spring. Christian.

NURS 73 **Maternal/Newborn Nursing** (5 credit hours)

The course focuses on application of critical thinking skills to provide competent maternal and newborn care and demonstration of caring through the family centered approach to maternal/newborn care. Fall, Spring. Lowdermilk.

NURS 74 **Community Health Nursing** (5 credit hours)

The course provides a theoretical and empirical foundation for the practice of community/public health nursing using critical thinking to focus on health promotion and disease prevention. Fall, Spring. Foster.

NURS 75 **Nursing Care of Patients with Mental Health Problems** (5 credit hours)

The course relies upon critical thinking for applying psychiatric and nursing theories to the nursing process in the care of mentally ill clients and families in various health care settings. Fall, Spring. Rynerson.

NURS 88 **Introduction to Nursing Research** (3 credit hours)
This introductory course helps students conceptualize both the basic research process and the importance of research to nursing, and enables students to understand and use published health care research. Fall, Spring. Lawrence.

NURS 93 **Nursing Care of Patients with Major Adult Health Problems II** (8 credit hours)
Second level course in applying critical thinking skills to complex health problems of adults. Emphasis will be placed on continuity of care and intervention necessary for promoting optimal patient outcomes. Spring. Bunker.

Course Descriptions: Context Component

NURS 81 **Care Management** (3 credit hours)
The course explores theoretical and contextual elements of nursing care management. Models of care management are analyzed emphasizing the role of the nurse in care coordination, discharge planning and referral. Summer. Bunker.

NURS 89 **Leadership in Organizations** (3 credit hours)
The course uses a systems approach to examine leadership behaviors and organizational structures that enhance patient care delivery. Organizational roles and their implications for professional nursing practice are emphasized. Fall, Spring. Woodard.

NURS 92 **The Nursing Profession in Today's Health Care System** (3 credit hours)
Current social, economic, legal, ethical, and policy issues affecting the practice, education and profession of nursing are explored. Woodard.

The RN/BSN Completion Program

Deborah Thompson, RN, EdD
Coordinator, RN/BSN Program

The RN/BSN Completion Program offers registered nurses an opportunity to grow personally and professionally. Courses are designed to build on the registered nurse students' basic nursing education and practical experience. The curriculum is tailored to meet the needs of adult learners while providing theory-based content, critical thinking skills and practical experience to strengthen nursing knowledge.

Courses in the practice component of the RN/BSN Completion Program emphasize conceptual bases of professional practice, the research process, and alternative paradigms for practice. Clinical courses provide experience in community health nursing and an opportunity to apply theory based interventions to address a problem in a setting of the student's choice.

The context component emphasizes professional roles, nursing and health care delivery issues, and the relationship of nursing to the health care delivery system.

RN/BSN Curriculum

Course Sequence

Registered nurses working toward a Baccalaureate Degree ordinarily complete courses in the following sequence:

2nd Summer Session

NURS 151*Health and Illness in Modern Society (3 credit hours)
NURS 69 Health Assessment (3 credit hours)

Fall

NURS 88 Introduction to Nursing Research (3 credit hours)
NURS 89 Leadership in Organizations (3 credit hours)
NURS 90 Conceptual Bases of Professional Nursing Practice (3 credit hours)
NURS 91 Improving Nursing Practice: Application of Concepts, Theories and Research (3 credit hours)

Spring

NURS 92 The Nursing Profession in Today's Health Care Systems (3 credit hours)
NURS 94 Community Health for Nursing Practice (6 credit hours)
NURS 95 Alternative Paradigrams for Nursing Practice (3 credit hours)

*Graduate course; will count toward MSN

RN/BSN Course Descriptions

NURS 69 **Health Assessment** (3 credit hours)
This course provides an introduction to patient assessment including interviewing, history taking, physical exam, and recording, analysis, and use of assessment data in planning patient care.

NURS 88 **Introduction to Nursing Research** (3 credit hours)
This introductory course helps students conceptualize both the basic research process and the importance of research to nursing, and enables students to understand and use published health care research. Fall, Spring. Lawrence.

NURS 89 **Leadership in Organizations** (3 credit hours)
The course uses a systems approach to examine leadership behaviors and organizational structures that enhance patient care delivery. Organizational roles and their implications for professional nursing practice are emphasized. Fall, Spring. Woodard.

NURS 90 **Conceptual Bases of Professional Nursing Practice** (3 credit hours)
Selected concepts and theories are explored as a basis for making judgments and decisions in nursing practice. Critical thinking skills are developed as an essential component of professional practice.

NURS 91 **Improving Nursing Practice: Application of Concepts, Theories and Research** (3 credit hours)
This course emphasizes analysis of clinical problems which affect the nursing care of selected populations. Students also apply the nursing process, therapeutic communication skills, and teaching-learning principles in clinical situations.

NURS 92 **The Nursing Profession in Today's Health Care System** (3 credit hours)
Current social, economic, legal, ethical, and policy issues affecting the practice, education and profession of nursing are explored. Woodard.

NURS 94 **Community Health Nursing** (6 credit hours)
Provides a theoretical and empirical foundation for the practice of community health nursing. Critical thinking skills are developed and utilized in case management. The application of health promotion/disease prevention strategies are explored.

NURS 95 **Alternative Paradigms for Nursing Practice** (3 credit hours)
Concepts and principles underlying biomedical and biopsychosocial approaches to health care delivery are analyzed to determine their impact on health and to provide a framework for integrating both approaches to care.

NURS 151 **Health and Illness in Modern Society** (3 credit hours)
Examines and compares patterns of health and illness in USA and other industrial and developing countries. Analyzes effectiveness of policy and program interventions.

Electives

The School of Nursing offers the elective courses described below. Nursing 187, Ethical Values in Nursing Practice, may be used as the lower division philosophical perspective course.

NURS 113 **Special Problems** (2-6 credit hours)
NURS 114 **Special Problems**

These courses are available to advanced undergraduate and graduate students. Their goal is to provide the student with opportunities to individualize work in an area of interest not regularly provided for by the ongoing nursing courses. The student studies under the direction of one or more faculty members who are knowledgeable in the area of the student's need and/or interest. Staff.

NURS 176 **Women Over 50 in Contemporary Society** (3 credit hours)

The course will view the population group of women over 50 from several perspectives—sociological, economic, political, and psychological—looking at their health and their roles in family, work, and community. Taggart.

NURS 181 **Pain Coping, Pain Management, and the Pain Experience** (2 credit hours)

Students learn to take a history, attend to pain cues, pain assessment, and nursing interventions. Topics include coping strategies, ethics, pharmacological approaches, and the literature of pain. Copp.

NURS 183 **Gerontological Nursing** (2 credit hours)

Provides a study of the process of human aging with a focus on nursing care issues in the secondary care setting. Staff.

NURS 184 **Women, Science, and Technology** (3 credit hours)

Examines women as creators and beneficiaries of science and technology. Considers women as scientists and inventors; gender biases in scientific theories; reproductive, household, child care technologies; and feminist approaches to inquiry. Staff.

NURS 185 **(Social Work 385) Care of the Dying and Bereaved Throughout the Life Span** (3 credit hours)

The overall focus of the course, designed for students from a variety of health sciences related disciplines, is to gain an understanding of issues in working with dying and bereaved individuals of all ages and their families. In addition, various models for providing care to the dying and bereaved will be discussed.

NURS 186 **Exploring the Developmental, Physiological, and Psychological Dimensions of Child Health Care** (2-3 credit hours)

The course focuses on theories of growth and development and on empirical data about physiological, physical, and developmental changes in children as a basis for assessment and intervention with ill and/or handicapped children. Miles.

NURS 187 **Ethical Issues in Nursing Practice** (2 credit hours)

Examination and discussion of major ethical issues arising in the professional practice of nursing in the context of systematic consideration of the nature of ethical choice. Pierce.

NURS 188 **AIDS: Principles, Practices and Politics** (1-3 credit hours)

This seminar and lecture course provides an in-depth analysis of clinical, ethical and social issues related to AIDS, including mandatory vs voluntary testing, questions of confidentiality, needle exchange programs and how candid AIDS education should be. It also examines behavioral and psychosocial aspects of sexual behavior and drug use internationally and in the U.S.

The University of North Carolina: A Brief History

In North Carolina, all the public educational institutions that grant baccalaureate degrees are part of The University of North Carolina. The University of North Carolina at Chapel Hill is one of sixteen constituent institutions of the multicampus state university.

The University of North Carolina, chartered by the N.C. General Assembly in 1789, was the first public university in the United States to open its doors and the only one to graduate students in the eighteenth century. The first class was admitted in Chapel Hill in 1795. For the next 136 years, the only campus of The University of North Carolina was at Chapel Hill.

In 1877, the N.C. General Assembly began sponsoring additional institutions of higher education, diverse in origin and purpose. Five were historically black institutions, and another was founded to educate American Indians. Several were created to prepare teachers for the public schools. Others had a technological emphasis. One is a training school for performing artists.

In 1931, the N.C. General Assembly redefined The University of North Carolina to include three state-supported institutions: the campus at Chapel Hill (now The University of North Carolina at Chapel Hill), North Carolina State College (now North Carolina State University at Raleigh), and Woman's College (now The University of North Carolina at Greensboro). The new multicampus University operated with one board of trustees and one president. By 1969, three additional campuses had joined the University through legislative action: The University of North Carolina at Charlotte, The University of North Carolina at Asheville, and The University of North Carolina at Wilmington.

In 1971, the General Assembly passed legislation bringing into The University of North Carolina the state's ten remaining public senior institutions, each of which had until then been legally separate: Appalachian State University, East Carolina University, Elizabeth City State University, Fayetteville State University, North Carolina Agricultural and Technical State University, North Carolina Central University, the North Carolina School of the Arts, Pembroke State University, Western Carolina University, and Winston-Salem State University. This action created the current sixteen campus University. (In 1985, the North Carolina School of Science and Mathematics, a residential high school for gifted students, was declared an affiliated school of the University.)

The UNC Board of Governors is the policy-making body legally charged with "the general determination, control, supervision, management, and governance of all affairs of the constituent institutions." It elects the president, who administers the University. The thirty-two voting members of the Board of Governors are elected by the General Assembly for four-year terms. Former board chairmen and board members who are former governors of North Carolina may continue to serve for limited periods as nonvoting members emeriti. The president of the UNC Association of Student Governments, or that student's designee, is also a nonvoting member.

Each of the sixteen constituent institutions is headed by a chancellor, who is chosen by the Board of Governors on the president's nomination and is responsible to the president. Each institution has a board of trustees, consisting of eight members elected by the Board of Governors, four appointed by the governor, and the president of the student body, who serves ex officio. (The NC School of the Arts has two additional ex officio members.) Each board of trustees holds extensive powers over academic and other operations of its institution on delegation from the Board of Governors.

Mission Statement

The University of North Carolina at Chapel Hill has been built by the people of the State and has existed for two centuries as the nation's first state university. Through its excellent undergraduate programs, it has provided higher education to ten generations of students, many of whom have become leaders of the state and the nation. Since the nineteenth century, it has offered distinguished graduate and professional programs.

The University is a research university. Fundamental to this designation is a faculty actively involved in research, scholarship, and creative work, whose teaching is transformed by discovery and whose service is informed by current knowledge.

The mission of the University is to serve all the people of the state, and indeed the nation, as a center for scholarship and creative endeavor. The University exists to expand the body of knowledge; to teach students at all levels in an environment of research, free inquiry, and personal responsibility; to improve the condition of human life through service and publication; and to enrich our culture.

To fulfill this mission, the University must:

- acquire, discover, preserve, synthesize, and transmit knowledge;
- provide high quality undergraduate instruction to students within a community engaged in original inquiry and creative expression, while committed to intellectual freedom, to personal integrity and justice, and to those values that foster enlightened leadership for the State and the nation;
- provide graduate and professional programs of national distinction at the doctoral and other advanced levels to future generations of research scholars, educators, professionals, and informed citizens;
- extend knowledge-based services and other resources of the University to the citizens of North Carolina and their institutions to enhance the quality of life for all people in the State; and
- address, as appropriate, regional, national, and international needs.

This mission imposes special responsibilities upon the faculty, students, staff, administration, trustees, and other governance structures and constituencies of the University in their service and decision-making on behalf of the University.

April 25, 1986, as adopted by the Board of Trustees, The University of North Carolina at Chapel Hill

Statement on Equal Educational Opportunity

The University of North Carolina at Chapel Hill is committed to equality of educational opportunity and does not discriminate against applicants, students, or employees based on race, color, national origin, religion, sex, age, or disability. Any complaints alleging failure of this institution to follow this policy should be brought to the attention of the Assistant to the Chancellor. Moreover, The University of North Carolina at Chapel Hill is open to people of all races and actively seeks to promote integration by recruiting and enrolling a larger number of black students.

Policy on Nondiscrimination

It is the policy of The University of North Carolina at Chapel Hill that educational and employment decisions should be based on individuals' abilities and qualifications and should not be based on irrelevant factors or personal characteristics that have no connection with academic abilities or job performance. Among the traditional factors which are generally "irrelevant" are race, sex, religion, and national origin. It is the policy of The University of North Carolina at Chapel Hill that an individual's sexual orientation be treated in the same manner. This policy prohibiting discrimination on the basis of sexual orientation does not apply to the University's relationship with outside organizations, including the federal government, the military, ROTC, and private employers.

The Honor Code: It shall be the responsibility of every student at The University of North Carolina at Chapel Hill to obey and to support the enforcement of the Honor Code, which prohibits lying, cheating, or stealing when these actions involve academic processes or University, student, or academic personnel acting in an official capacity.

The Campus Code: And it shall be the further responsibility of every student to abide by the Campus Code; namely, to conduct oneself so as not to impair significantly the welfare or the educational opportunities of others in the University community.

Pursuant to the federal Student Right-to-Know Act, we report that, in 1991-92, the completion or graduation rate for students who entered The University of North Carolina at Chapel Hill in 1986 on a full-time basis was 81.7 percent.

Organization

The Division of Health Affairs

Students in the School of Nursing are a part of the Division of Health Affairs at The University of North Carolina at Chapel Hill along with the Schools of Medicine, Dentistry, Pharmacy, and Public Health. This division was established to integrate and correlate the work of the health professional schools and the hospitals in their teaching and research development with the University.

As a part of the Division of Health Affairs, the School of Nursing benefits from the contributions of personnel and facilities in various centers, schools, and departments in the University. By sharing teaching, research, and library facilities the School provides students with a broad general education as well as preparation in professional nursing. Faculty and students may take advantage of the resources offered by the Health Services Research Center, the Carolina Population Center, the Center for Development and Learning, and the Center for Health Promotion and Disease Prevention.

Both undergraduate and graduate students in nursing take courses taught in other departments and schools of the University, and the physical facilities of the University campus are available to students in the School of Nursing.

Officers of the General Administration

C. D. Spangler, Jr., B.S., M.B.A., D.H.L., LL.D.
President

William F. Little, B.S., M.A., Ph.D.
Vice-President – Academic Affairs and Senior Vice-President

Roy Carroll, B.A., M.A., Ph.D.
Vice-President - Planning

Nathan F. Simms, Jr., B.S., M.S., Ph.D.
Vice-President - Student Services and Special Programs

L. Felix Joyner, A.B.
Vice-President - Finance

Jasper D. Memory, B.S., Ph.D.
Vice-President - Research

Wyndham Robertson, A.B.
Vice-President - Communications

Jay M. Robinson, B.S., M.A., Ed.D.
Vice-President - Special Projects

David G. Martin, Jr., B.A., LL.B.
Vice-President - Public Affairs

L. B. Corgnati, Jr., B.S., M.S.
Interim Secretary of the University

Richard H. Robinson, Jr., A.B., LL.B.
Assistant to the President for Legal Affairs

Officers of the UNC-Chapel Hill Administration

Paul Hardin, J.D.
Chancellor

Susan Haughton Ehringhaus, J.D.
Assistant to the Chancellor and Senior University Counsel

Douglass Hunt, LL.B.
Special Assistant to the Chancellor

David D. Dill, Ph.D.
Assistant to the Chancellor for Planning

Robert J. Cannon, Ph.D.
Affirmative Action Officer

Arch T. Allen III, J.D.
Vice-Chancellor for Development and University Relations

Mary Sue Coleman, Ph.D.
Vice-Chancellor and Dean of Research

Donald Arthur Boulton, Ed.D.
Vice-Chancellor and Dean of Student Affairs

Howard Garland Hershey, Jr., D.D.S.
Vice-Chancellor for Health Affairs and Vice-Provost

Wayne R. Jones, B.A.
Vice-Chancellor, Business and Finance

Richard L. McCormick, Ph.D.
Vice-Chancellor for Academic Affairs and Provost

John Douglas Swofford, M.Ed.
Director of Athletics

Harold Gene Wallace, M.Div.
Vice-Chancellor, University Affairs

School of Nursing Administration

Cynthia M. Freund, Ph.D., R.N., F.A.A.N.
Dean

Carol C. Hogue, Ph.D., R.N., F.A.A.N.,
Associate Dean for Graduate Studies

Beverly B. Foster, M.P.H., M.N., R.N., Ph.D.
Acting Associate Dean for Undergraduate Studies

Sandra G. Funk, Ph.D.
Associate Dean for Research
Director, Research Support Center

Susan F. Pierce, Ph.D., R.N.
Associate Dean for Community Outreach
Director, Statewide AHEC Nursing

Maude H. Speakman, M.S.N., R.N.
Assistant Dean

Barbara B. Germino, Ph.D., R.N., F.A.A.N.
Chair, Department of Adult and Geriatric Health

Jean Goeppinger, Ph.D., R.N., F.A.A.N.
Chair, Department of Community and Mental Health

Margaret S. Miles, Ph.D., R.N., F.A.A.N.
Chair, Department of Health of Women and Children

Patricia Lawrence, M.A., R.N.
Acting Chair, Department of Social and Administrative Systems

Virginia J. Neelon, Ph.D., R.N.
Director, Biobehavioral Lab

Maggie Ford, B.A.
Acting Director, Office of Business Affairs

Laurice Ferris, M.A., R.N., Director
Continuing Education Program

Larue Coats, Ph.D.
Director, Design and Educational Support Center

David Magee, Ed.D.
Director, Office of Development

Janet Blue, M.A.
Director, Office of Information and Technology Systems

Lorna H. Harris, Ph.D., R.N.
Director, Office of Minority Affairs

Beth Shaw, B.A.
Director, Office of Public Relations and Alumni Affairs

Carol F. Durham, M.S.N., R.N.
Director, Skills Lab

Deborah Thompson, Ed.D., R.N.,
Director, Student Services
Coordinator, R.N./B.S.N. Completion Program

Faculty

(*after name denotes full graduate appointment)
(† after name denotes Fellow in the American Academy of Nursing)

Professors

Laurel Archer Copp (1975) *† Dean Emerita

B.S.N. Ed. (1956) Dakota Wesleyan University; M.N. (1962), Ph.D. (1967) University of Pittsburgh; Certificate (1974) Harvard School of Business, Program in Health Systems Management

Margery A. Duffey (1980)*

B.S. (1949) College of Saint Teresa; M.S. (1954) Case Western Reserve University; Ph.D. (1967) University of Minnesota

Cynthia Freund (1984) Dean—School of Nursing*†

B.S.N. (1963) Marquette University; M.S.N. (1973), Family Nurse Practitioner Certificate (1974) The University of North Carolina at Chapel Hill; Ph.D. (1981) University of Alabama at Birmingham

Sandra G. Funk (1973) Associate Dean for Research, Director of Research Support Center*

B.A. (1967) University of California, Santa Barbara; M.S. (1972), Ph.D. (1976) The University of North Carolina at Chapel Hill

Jean Goeppinger *† Chair—Department of Community and Mental Health

B.S.N. (1964) St. Olaf College; M.S. (1966) University of Minnesota; M.A./Ph.D. (1977) Case Western Reserve

Margaret S. Miles (1984)*† Chair—Department of Health of Women and Children

Diploma (1958) Mercy Hospital School of Nursing; B.S.N. (1963) Boston College; M.N. (1965) University of Pittsburgh; M.A. (1973), Ph.D. (1976) University of Missouri

Nancy Milio (1976)*

B.S. (1960), M.A. (1965) Wayne State University; Ph.D. (1970) Yale University

Merle H. Mishel (1991)*

B.S.N. (1961) Boston University; M.S.N. (1966) University of California at Los Angeles; M.A. (1976), Ph.D. (1980) Claremont Graduate School

Margarete Sandelowski (1986)*†

B.S.N. (1969) University of Pennsylvania; M.S.N. (1971) Boston University; Ed.M. (1977) Teachers College, Columbia University; Ph.D. (1982) Case Western Reserve University

Associate Professors

Eleanor M. Browning (1974)*
Certificate (1953) Bluefield College; B.S.N. (1956) Medical College of Virginia; M.S. (1960) Boston University

Barbara Bunker (1974)
Diploma in Nursing (1963) Creedmore State Hospital; B.S.N. (1967) Adelphi University; M.S.N. (1973) Syracuse University

Margaret E. Campbell (1974)*
B.S.N. (1964), M.S.N. (1969) The University of North Carolina at Chapel Hill

Jo Ann Dalton (1975)*†
B.S.N. (1957), M.S.N. (1960) Duke University; Ed.D. (1984) North Carolina State University

Virginia Gayle Tart Davis (1972)
B.S.N. (1969), M.S.N. (1972), The University of North Carolina at Chapel Hill; Ed.D. (1990) North Carolina State University

Mary C. Dowe (1977)*
B.S.N. (1955), M.S. (1961) Emory University; Ed.D. (1973) University of Kentucky

Laurice Ferris (1972) Director of Continuing Education*
B.S.N. (1957) University of Michigan; M.A. (1964) Columbia University; Certificate (1967) Cardiovascular Nurse Specialist Program, Methodist Hospital, Houston, Texas

Anne Elizabeth Hopkins Fishel (1965)*
B.S.N. (1962), M.S.N. (1965) The University of North Carolina at Chapel Hill; Ph.D. (1985) The University of North Carolina at Greensboro

Catherine Ingram Fogel (1968)*
B.S.N. (1963), M.S. (1968) The University of North Carolina at Chapel Hill; Ph.D. (1988) North Carolina State University

Annette Frauman (1984)*†
A.S.N. (1969) Broward Community College; B.S.N. (1973), M.S.N. (1974) University of Florida at Gainesville; Ph.D. (1991) University of Texas at Austin

Barbara B. Germino (1982) Chair—Department of Adult and Geriatric Health*†
B.S.N. (1963), M.S.N. (1967) Duke University; Ph.D. (1984) University of Washington

Edward Halloran (1989)*†
B.S. (1971) Southern Connecticut State College; M.P.H (1975) Yale University; Ph.D. (1980) University of Illinois

Joanne Harrell (1984)*
B.A. (1963) College of Saint Catherine; B.S.N. (1965) Avila College; M.S.N. (1971) University of Florida at Gainesville; Ph.D. (1984) University of Texas at Austin

Carol Hogue (1986) Associate Dean for Graduate Studies*†
B.S.N. (1956), M.S.N. (1960) Duke University; Ph.D. (1974) The University of North Carolina at Chapel Hill

Diane Holditch-Davis (1985)*
B.S.N. (1973) Duke University; M.S. (1980), Ph.D. (1985) University of Connecticut

Cathee Huber (1973)*
B.S.N. (1964) University of Michigan; M.N. (1966) University of Washington

Margaret Fredericka Hudson (1973)*
B.S.N. (1963) Duke University; M.Ed. (1969) Michigan State University; Ph.D. (1988) University of Texas at Austin

Patricia A. Lawrence (1973)* Acting Chair—Department of Social and Administrative Systems
B.A. (1954) Bates College; M.A. (1960) Columbia Teachers College

Mary R. Lynn (1991)
Diploma (1971) Orange Memorial Hospital School of Nursing; A.A. (1972) Valencia Community College; B.S.N. (1974), M.S.N. (1975), Ph.D. (1979) University of Florida at Gainesville

Shirley C. Mason (1973)
B.S.N. (1957) The University of North Carolina at Chapel Hill; M.S.N. (1966) University of Maryland

Helen M. Murphy (1975)*
B.S.N. (1956) Mercy College of Detroit; M.S.N. (1968) Wayne State University; M.P.H. (1975) University of Michigan

Virginia Johnston Neelon (1971) Director of Biobehavioral Laboratory*
B.S.N. (1957) Duke University; M.S.N. (1961) University of California, San Francisco; Ph.D. (1972) Duke University

Barbara Nettles-Carlson (1973)
B.S.N. (1970), M.P.H. (1977) The University of North Carolina at Chapel Hill, Specialist in Clinical Nursing (1979) Indiana University

Susan F. Pierce (1975) Director of Statewide AHEC Nursing/Associate Dean for Community Outreach*
Diploma in Nursing (1969) Union Hospital School of Nursing; B.S. (1973) Southeastern Massachusetts University; M.S.N. (1975), Ph.D. (1990) The University of North Carolina at Chapel Hill

Barbara Rynerson (1974)*
B.S. (1957), M.S. (1962) University of Oregon; Post-Masters (1965) University of California at San Francisco

Linda Smith (1976)
B.S.N. (1973), M.S.N. (1975) Duke University; Adult Nurse Practitioner Certificate (1969) Boston University

Ingrid Elizabeth Swenson (1978)*
B.S.N. (1971) University of Maryland; M.P.H. (1973), Dr. P.H. (1976) Johns Hopkins University

Priscilla Ulin (1983)*
B.A. (1954) Mount Holyoke College; M.N. (1957) Yale University; M.S. (1971), Ph.D. (1976) University of Massachusetts

Assistant Professors

Carol Baker (1993)
B.S.N. (1965) Ohio State University; M.S. (1968), PhD (1986) University of Michigan

Becky Christian (1992)
B.S.N. (1975), M.S.N. (1979) University of Missouri at Columbia; Ph.D. (1989) The University of North Carolina at Chapel Hill

Jennifer D'Auria (1991)
B.S.N. (1974) North Park College; M.S., P.N.P. (1979) University of Colorado; Ph.D. (1992) University of Texas at Austin

Julie Fleury (1992)
B.S.N. (1985) Northern Arizona University; M.S. (1987), Ph.D. (1990) University of Arizona

Judith Miller (1991)
B.S.N. (1974) Adelphi University; M.S.N. (1977) Duke University; Ph.D. (1991) Oregon Health Sciences University

Judy Morrow (1993)
B.S.N. (1975) M.S.N. (1981) Indiana University; PhD (1990) Purdue University

Randolph Rasch (1987)
B.S. (1974) Andrews University; M.S.N. (1979) Vanderbilt University; Ph.D. (1988) University of Texas at Austin

Joann Richards (1993)
B.S.N. (1976) University of Michigan; M.S.N. (1978) Wayne State University; M.B.A. (1985) Oakland University; Ph.D. (1993) University of Michigan

Eleanor Taggart (1977)
B.S.N. (1957) Cornell University; M.S.N. (1970) Case Western Reserve University

Lecturers

Pamela Chappell (1989)
B.A. (1972) Mercer University; M.Ed. (1974) University of Florida

Larue Coats (1993) Director, Design and Educational Support Center
B.A. (1969) M.Ed. (1980) Campell University; Ph.D. (1986) University of North Carolina at Chapel Hill

Maude Speakman (1992) Assistant Dean—School of Nursing
B.S.N. (1966) North Carolina Central University; M.S.N. (1969) Wayne State University

Elizabeth Tornquist (1974)
B.S. (1954) Duke University; M.A. (1956) University of Chicago

Clinical Professor

Deitra Lowdermilk (1974)*
B.S.N. (1966) East Carolina University; M.Ed. (1974) Ph.D. (1986) The University of North Carolina at Chapel Hill

Clinical Assaciate Professars

Patricia Brown (1993)

B.S.N. (1970) Hunter College; M.S.N. (1976) Adelphi University; Ph.D. (1985) Hofstra University

Beverly Webster Ferreiro (1978)

AB.S. (1962) Loma Linda University; M.S. (1967) New York University; Ph.D. (1988) The University of North Carolina at Greensboro

Betty G. Harris (1980)*

B.S.N. (1962), M.S.N. (1963) University of Alabama; Ph.D. (1982) North Carolina State University

Rachel Stevens (1988)

B.S.N. (1957), M.S.N. (1960) The University of North Carolina at Chapel Hill; Ed.D. (1983) North Carolina State University

Deborah Thompson (1975) Director of Student Services

B.S.N. (1971); M.S.N. (1975), Ed.D. (1989) North Carolina State University

Clinical Assistant Professars

Kathryn Alden (1988)

B.S.N. (1974) The University of North Carolina at Charlotte; M.S.N. (1979) The University of North Carolina at Chapel Hill

Bonnie Angel (1984)

B.S.N. (1979) The University of North Carolina at Chapel Hill; M.S.N. (1983) Duke University

Linda B. Brown (1982)

B.S.N. (1965) University of Rochester; M.S.N. (1981) Duke University

Patricia A. Cloonan (1989)

B.S. (1970), M.S. (1974) Boston College; Ph.D. (1989) University of Virginia

M. Carolyn Cooper (1990)

B.A. (1964) Baylor University; B.S.N. (1979), M.S.N. (1983) The University of North Carolina at Greensboro; Ph.D. (1990) University of Virginia

Carol Durham (1982) Director of Skills Laboratory

B.S.N. (1976) Western Carolina University; M.S.N. (1982) The University of North Carolina at Chapel Hill

Sheila Englebardt (1988)

B.S. (1962) New York University; M.Ed. (1976) The University of North Carolina at Charlotte; Certificate (1983) University of Colorado; Ph.D. (1993) Virginia Commonwealth University

Beverly B. Foster (1982)

Acting Associate Dean for Undergraduate Studies; B.S. (1964) Syracuse University; M.N. (1972) University of California at Los Angeles; M.P.H. (1982) University of Hawaii; Ph.D. (1993) University of North Carolina at Chapel Hill

Catherine Garner (1993)

B.S.N. (1976) Vanderbilt University; M.A. (1980) University of Tennessee; M.S.N. (1982) Vanderbilt University

Suzanne Bower Herman (1985)

B.S.N. (1979) Duke University; M.S.N. (1982), F.N.P. (1982) The University of North Carolina at Chapel Hill

Carol Lee Johnston (1984)

A.D.N. (1970), B.S.N. (1974) University of South Carolina; M.E.D. (1977) Memphis State University; M.S.N. (1981) University of Tennessee

Jane Kaufman (1984)

B.S.N. (1970), M.S.N. (1971) Ohio State University

Janet Morton (1992)

B.S. (1970), (1976) University of Wisconsin; M.A. (1983) University of Washington

Mary Ann Peter (1992)

B.S.N. (1962), M.S.N. (1965) Duke University; Ph.D. (1992) The University of North Carolina at Chapel Hill

M. E. Bonnie Rogers (1984)

Diploma (1966) Washington Hospital Center School of Nursing; B.S.N. (1976) George Mason University; M.P.H. (1977), Advanced Study Health Service Administration Certificate (1978), Ph.D. (1985) Johns Hopkins University

Clinical Instructars

Madelyn Ashley (1993)

B.S.N. (1975) University of Virginia; M.S.N. (1988) University of North Carolina at Chapel Hill

Donald Bailey (1991)

B.S.N. (1986) Atlantic Christian College; M.N. (1989) Emory University

Lynne Brophy (1992)

B.S.N. (1984) Duke University; M.S.N. (1992) The University of North Carolina at Chapel Hill

Sheila Bryant (1992)

B.S.N. (1979) Georgtown University; M.S.G. (1980) University of Southern California

Jill French (1992)

B.S.N. (1985) The University of Iowa; M.S.N. (1992) The University of North Carolina at Chapel Hill

Dustine Dix (1992)

Diploma (1977) Lutheran General and Deacons Hospital; B.S.N. (1983) North Elmhurst College; M.S. (1987) Rush University

Jennifer Hawley (1989)

B.S.N. (1982), M.S.N. (1988) The University of North Carolina at Chapel Hill

Maureen Kelly (1993)

B.S.N. (1977) University of Virginia; M.S. (1985) University of Maryland

Elizabeth Manley (1992)

B.S.N. (1973) State University of New York; M.S. (1992) The University of North Carolina at Chapel Hill

Joellyn L. McCrory (1980)

B.S.N. (1971) University of Delaware; M.S.N. (1979) Marquette University

Mary Spencer (1991)

B.S.N. (1980) Duke University; M.N. (1986) Louisiana State University

Ellen Tim (1991)

B.S.N. (1979) University of Connecticut; M.S.N. (1990) The University of North Carolina at Chapel Hill

Elizabeth Woodard (1991)

B.S.N. (1981) The University of North Carolina at Greensboro; M.S.N. (1987) The University of North Carolina at Chapel Hill

Research Associate Professors

Michael Belyea (1989)

B.A. (1974), M.A. (1977) University of Dakota; Ph.D. (1981) North Carolina State University

Lorna Hines Harris (1978) Director of Minority Affairs

B.S.N. (1973) North Carolina Agricultural and Technical State University; M.S. (1976), Ph.D. (1989) The University of North Carolina at Chapel Hill

Research Instructors

Susan Brunssen (1992)

B.S.N. (1971) University of Maryland; M.S.N. (1977) University of Alabama

John Carlson (1988)

B.S. (1971) University of Iowa; M.S. (1975) Virginia Polytechnic Institute

Jennifer Daniels (1993)

B.S.N. (1986) Purdue University; M.S.N. (1991) University of North Carolina at Chapel Hill

Wendy Lin (1992)

B.S. (1983) National Taiwan University; M.A. (1988), Ph.D. (1992) The University of North Carolina at Chapel Hill

Kelly L. Puryear (1993)

B.S. (1982) University of Virginia; M.Ed. (1987) University of North Carolina at Chapel Hill

Visiting Reseorch Instructor

Chyrise Bradley (1992)

B.S. (1986) Wake Forest University; M.A. (1991) The University of North Carolina at Chapel Hill

Professors Emeritoe

Katherine B. Nuckolls (1978)

A.B. (1938) University of Michigan; M.N. (1941) Yale University; M.Sc. (1962), Ph.D. (1970) The University of North Carolina at Chapel Hill

Mary Walker Randolph (1956)

Diploma in Nursing (1924) Los Angeles General Hospital; B.S.N.Ed. (1932) University of Virginia; M.A. (1940) Columbia University

Marion Staunton Wood (1958)

Diploma in Nursing (1929) Garfield Memorial Hospital, Washington; B.S. (1939) Ohio State University; M.A. (1955) Columbia University

Associote Professors Emeritoe

Audrey Joyce Booth (1968)

B.S. (1945) Doane College; M.N. (1948) Case Western Reserve University; M.S.N. (1957) The University of North Carolina at Chapel Hill; Certificate (1979) Harvard Business School, Program in Health Systems Management

Bonnie Keaton Hensley (1968)

Diploma (1940) Johns Hopkins; B.S.N. (1964) The University of North Carolina at Chapel Hill; M.S.N. (1966) Duke University

Betty H. Landsberger (1976)

B.A. (1939) Florida State University; M.A. (1940) University of Michigan; Ph.D. (1951) Cornell University

Clara Mixon Lewis (1964)

B.S. (1952) Winthrop College; M.S. (1954) Ohio State University

Marian Smallegan (1970)

A.B. (1945) Hope College; M.A. (1947) University of Illinois; Ed.D. (1969) Boston University

Clinicol Associote Professor Emerito

Alice E. Deitz (1977)

Diploma (1948) Lankenau Hospital; B.S.N.E. (1950) University of Pennsylvania; M.S. (1977) The University of North Carolina at Chapel Hill

Adjunct Associote Professors

Mary Champagne (1991)

B.S.N. (1968) San Jose State College; M.S.N. (1975), Ph.D. (1981) University of Texas at Austin

Frances Ross (1978)

B.S.N. (1959) The University of North Carolina at Chapel Hill

Adjunct Assistont Professors

Marcia Brooks (1987)

B.S.N. (1957) University of South Carolina at Columbia; M.S.N. (1964) The University of North Carolina at Chapel Hill

Margaret G. Bye (1983)

B.S.N. (1964) Villanova University; M.S.N. (1978) The University of North Carolina at Chapel Hill; Ed.D. (1980) North Carolina State University

Patricia Christian (1985)

B.S.N. (1970) Villanova University; M.S.N. (1978) The University of North Carolina at Chapel Hill; Ed.D. (1980) North Carolina State University

Paul Dunn (1988)

B.S.N. (1980) State University of New York at Plattsburgh; M.S.N. (1984) The University of North Carolina at Chapel Hill

Pamela Edwards (1990)

B.S.N. (1978) Atlantic Christian College; M.S.N. (1984) Villanova University; Ed.D. (1989) North Carolina State University

Gloria Ann Evans (1990)

B.A. (1972) Butler University; M.S. (1983), Dr.PH (1988) The University of North Carolina at Chapel Hill

Sandra K. Evans (1980)

B.S.N. (1965) Ohio State University

Estelle Fulp (1989)

B.S.N. (1962) Duquesne University; M.P.H. (1966) The University of North Carolina at Chapel Hill

Hettie L. Garland (1977)

B.S.N. (1965) Duke University; Family Nurse Practitioner Certificate (1972), M.P.H. (1984) The University of North Carolina at Chapel Hill

Martha Henderson (1982)

B.S.N. (1968) Dulla University; F.N.P. Certificate (1973); Geriatric Nurse Practitioner Certificate (1977); The University of North Carolina at Chapel Hill; M.S.N. (1978) Duke University; D.Min. (1986); Southeastern Baptist Theological Seminary

G. Nicholas Herman (1987)

B.A. (1977) The University of North Carolina at Chapel Hill; J.D. (1981) Duke University

Pamela Herriott (1980)

B.S.N. (1967) Cornell University; M.S.N. (1980) The University of North Carolina at Chapel Hill

Jean Hill (1979)

B.S.N. (1970) Berea College; M.N. (1974) Boston University

Deborah Lekan-Rutledge (1991)

Diploma (1976) St. Vincent Charity Hospital School of Nursing; B.S.N. (1981) The University of North Carolina at Chapel Hill; M.S.N. (1982) Georgetown University

Cynthia Luke (1982)

B.S.N. (1962) University of Michigan; M.S.N. (1976) Boston University

Merry K. Moos (1988)

B.S.N. (1970) University of Washington; N.P. Certificate (1973) University of California at Los Angeles; M.P.H. (1978) The University of North Carolina at Chapel Hill

Elizabeth Munsat (1982)

B.A. (1967), B.S. (1972) University of California at Irvine (1975); B.S.N (1975) The University of North Carolina at Chapel Hill; M.S.N. (1978) Duke University

Shelia Northern (1992)

B.S.N. (1972) M.S.N. (1991) University of North Carolina at Chapel Hill

Patricia O'Leary-Cunningham (1982)

B.S.N. (1984) Mercy College of Detroit; M.P.H. (1979) The University of North Carolina at Chapel Hill

Ruth Ouimette (1987)

B.S.N. (1971) University of Bridhefort; M.S.N. (1975) Yale University

Cheryl Proctor (1991)

B.S.N (1976) The University of North Carolina at Greensboro; M.S.N., F.N.P. Certificate (1983, 1985) The University of North Carolina at Chapel Hill

Janette Jacobs Riordan (1985)

B.S. (1973), M.S. (1977) University of New York

Carol W. Sackett (1978)

B.S.N. (1961) Duke University; M.P.H. (1974) The University of North Carolina at Chapel Hill

Saundra Shay (1986)

R.N. (1959) Yale-New Haven Medical Center; B.S.N. (1962) Boston University; M.S. (1976) East Carolina University; Ed.D. (1979) North Carolina State University

Dennis Sherrod (1992)

B.S. (1979) Atlantic Christian College; M.S.N. (1982) East Carolina University; Ed.D. (1991) North Carolina State University

Angela Staab (1985)

B.S.N. (1965), M.S.N. (1971), F.N.P. Certificate (1972) University of Pittsburgh; Primary Care Nurse Practitioner Certificate (1981) American Nurses Association

Karen Thomas (1983)

B.S.N. (1976) Atlantic Christian College; M.S.N. (1980) East Carolina University

Tina Vassar (1985)

B.S.N. (1979) Radford University; M.S.N. (1982); University of Virginia

Gwendolyn Waddell (1989)

B.S.N. (1970), M.S.N. (1976) The University of North Carolina at Chapel Hill

Susan A. Zeisel (1991)

B.S.N. (1971) Boston University; M.A./M.S.N. (1973) Boston College; Ed.D. (1983) Boston University

Adjunct Instructors

Jo Ann Adams (1991)

Diploma (1961) North Carolina Baptist Hospital School of Nursing; B.H.S. (1979) Campbell University; M.S.N., F.N.P. (1983) The University of North Carolina at Chapel Hill

Gail Adcock (1993)

B.S.N. (1978) East Carolina University; M.S.N. (1987) University of North Carolina at Chapel Hill

Judith Adcock (1986)

B.A. in Education (1964) Radford College; Diploma (1967) Community Hospital of Roanoke Valley at Roanoke College

Anthony Adinolfi (1991)

B.S.N. (1981) The University of North Carolina at Chapel Hill

Lynette Ball (1991)

Diploma (1980) Mercy Hospital School of Nursing; B.S.N. (1985) North Carolina Agricultural and Technical State University; M.P.A. (1989) The University of North Carolina at Greensboro

Jennifer Borton (1992)

B.S.N. (1987), M.S.N. (1991) The University of North Carolina at Chapel Hill

Jimmie Butts (1988)

Diploma (1957) Mid-State Baptist Hospital; F.N.P. Certificate (1976) The University of North Carolina at Chapel Hill

Dona Caine (1989)

B.S.N. (1979) University of Nevada at Las Vegas; M.S.N. (1981) Boston University

Donna Cederberg (1990)

B.S.N. (1975) East Carolina University; M.S.N. (1980) Duke University

Joanne C. Carl (1993)

B.S. (1958) University of Colorado; M.S.P.H. (1983) University of North Carolina at Chapel Hill

Joanne Corson (1990)

B.S.N. (1975), M.S.N. (1964) University of Pennsylvania

Colleen Davis (1990)

B.S.N. (1984) Salve Regina College; M.S.N. (1989) University of Pennsylvania

Ellen Davis (1992)

B.S.N. (1963) Vanderbilt University; M.S. (1969) University of Colorado

Cynthia Ebert (1991)

B.S.N. (1981) University of Virginia; M.S.N. (1985) The University of North Carolina at Chapel Hill

Delores Estes (1991)

B.S.N. (1957) Agricultural and Technical College of North Carolina; M.S. (1967) University of Maryland at Baltimore

Margaret Faircloth (1989)

B.S.N. (1977) Emory University; M.P.H. (1982) The University of North Carolina at Chapel Hill

Anne Flash (1989)

B.S.N. (1980), M.S.N. (1985) The University of North Carolina at Chapel Hill

Catherine Glasscock (1993)

B.A. (1971) Wake Forest University; B.S.N. (1975) University of North Carolina at Chapel Hill

Virginia Grabowski (1992)

B.S. (1967) Wilkes University; M.S. (1969) Southern Connecticut University

Nina Hackney (1989)

B.S.N. (1972), M.S.N. (1988) The University of North Carolina at Chapel Hill

Nora Hammond (1992)

B.S.N. (1960); Henry Ford School of Nursing; M.S. (1984) University of Detroit

Nancy Harrison (1993)

B.S.N. (1967) University of North Carolina at Chapel Hill; M.S.N. (1983) East Carolina University

Elizabeth Hixon (1992)

B.S.N. (1986) West Virginia Wesleyan College; M.S.N. (1990) Duke University

Paula Holden (1991)

B.S.N. (1974) Saint Olaf College; M.S. (1983) Medical College of Virginia

Joan Iannone (1990)

B.S.N. (1974) The University of North Carolina at Chapel Hill; M.S.N. (1986) The University of North Carolina at Greensboro

Helen Jernigan (1989)

B.S.N. (1977), M.P.H. (1989) The University of North Carolina at Chapel Hill

Gregory Johnson (1977)

Diploma in Nursing (1965) Charlotte Memorial Hospital School of Nursing

Cynthia Julich (1987)

B.S.N. (1976), M.S.N. (1979), University of Tennessee

Sally S. Kellum (1993)

B.S.N. (1979) Medical College of Virginia; M.N. (1987) University of Texas

Nancy Kiser (1991)

Diploma (1963) Southeastern General School; F.N.P. (1971) The University of North Carolina at Chapel Hill

Eileen Kugler (1989)

B.S.N. (1971) University of Connecticut; M.P.H. (1981), M.S.N. (1984) The University of North Carolina at Chapel Hill

Laura Mathea (1993)

B.S.N. (1974) Texas Woman's University; M.P.H. (1980) University of Texas

Kathy Matthews (1991)

B.S.N. (1968) Keuka College; M.S.N. (1976) University of Pennsylvania

Heidi McAfee (1993)

B.S.N. (1968) Duke University; M.S.N. (1976) University of Pennsylvania

Joanne P. McLees (1989)

B.S.N. (1963) Johns Hopkins University; M.S.N. (1980) The University of North Carolina at Chapel Hill

Faye McNaull (1989)

B.S.N. (1963), M.P.H. (1969) The University of North Carolina at Chapel Hill

Christine Meny (1992)

A.A.S. (1980) Lexington Technical Institute; B.S.N. (1985) University of Kentucky.

Ruth Miller (1991)

B.A. (1986) High Point College; M.P.A. (1988) The University of North Carolina at Greensboro

Katherine Moore (1991)

B.S.N. (1979), M.S.N. (1990) The University of North Carolina at Chapel Hill

Donna Nayduch (1990)

B.S.N. (1983) College Misericordia; M.S.N. (1987) Allentown College St. Francis DeSales

Peggy Norton (1979)

Diploma (1959) Watts School of Nursing;; F.N.P. Certificate (1973) The University of North Carolina at Chapel Hill; M.N. (1975) University of Pittsburgh

Joy Reed (1990)

B.S.N. (1970) Duke University; M.S. (1976) The University of North Carolina at Chapel Hill

Anna Schofield (1992)

B.S.N. (1976), M.S.N. (1990) Medical College of Georgia

Susan Short (1992)

B.S.N. (1966) University of Washington; M.S.N. (1972) Catholic University of America

Nancy Simeonsson (1991)

B.S.N. (1979) The University of North Carolina at Chapel Hill; M.A. (1990) North Carolina Central University

S. Susan Simon (1993)

B.S. (1975) State University of New York, Albany; M.S. (1978) Medical College of Virginia/Virginia Commonwealth University

Florence Soltys (1991)

B.S. (1958) University of Tennessee; M.S.W. (1984) The University of North Carolina at Chapel Hill

Jean Spencer (1983)

Diploma (1950) Memorial Hospital

Karen D. Stallings (1991)

B.S.N. (1975) Boston College; M.Ed. (1984) The University of North Carolina at Chapel Hill

Doris Sugg (1993)

Diploma (1970) Louise McCintock School of Nursing

Gale Touger (1984)

B.S.N. (1974) Duke University; F.N.P. Certificate (1974) The University of North Carolina at Chapel Hill

Barbara Trapp-Moen (1991)

B.S.N. (1983) Winona State University; M.S.N. (1990) The University of North Carolina at Chapel Hill

Tina M. Vassar (1985)

B.S.N. (1979) Radford University; M.S.N. (1982) University of Virginia

B. Jean Vukoson (1980)

Diploma (1973) Cabarrus Memorial Hospital School of Nursing; F.N.P. Certificate (1978) The University of North Carolina at Chapel Hill

Barbareta Welch (1991)

B.A., B.S.N. (1981), M.S.N. (1987) The University of North Carolina at Chapel Hill

Mary Ann White (1993)

B.S.N. (1984) University of North Carolina at Greensboro; M.S.N. (1990) Johns Hopkins University

Reid White (1989)

B.A. (1977) , B.S.N. (1980), M.S.N. (1987) The University of North Carolina at Chapel Hill

Susan Wilson (1993)

B.S.N. (1983) M.S.N. (1992) University of North Carolina at Chapel Hill

Christine Willis (1992)

B.S.N. (1973) Duke University; M.S.N. (1977) Case Western Reserve University

Janet Wolfe (1990)

B.S.N. (1979), M.S. (1981) Medical College of Virginia, Virginia Commonwealth University

Stephanie Yates (1993)

B.S.N. (1978) University of North Carolina at Chapel Hill; M.S.N. (1989) Duke University

Carolyn Yurick (1993)

B.S.N. (1988) University of Pittsburgh; M.S.N. (1992) Yale University

APPENDIX

Residence Status For Tuition Purposes

The information in this section comes from three sources: (i) North Carolina General Statutes, 116-143.1, (ii) A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes, Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes.

The following sections summarize important aspects of the residency law. A complete explanation of the Statute and the procedures under the Statute is contained in A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes. This Manual and other information concerning the application of this law are available for inspection in the Admissions Offices of the University. Copies of the Manual are also on reserve at the Robert B. House Undergraduate Library and in the Reserve Reading Room of the Health Sciences Library. All students are responsible for knowledge of the contents of the Statute and the Manual.

Every applicant for admission is required to make a statement as to his or her length of residence in North Carolina. A person who qualifies as a resident for tuition purposes under North Carolina law pays a lower rate of tuition than a nonresident. To qualify for in-state tuition, a legal resident must have been domiciled in North Carolina for at least twelve months immediately prior to the beginning of the term for which classification as a resident for tuition purposes is sought. The student must also establish that his or her presence in the State during such twelve-month period was for purposes of maintaining a bona fide domicile rather than for purposes of maintaining a mere temporary residence incident to enrollment in an institution of higher education. "Domicile" means one's permanent home of indefinite duration, as distinguished from a temporary place of abode; it is synonymous with "legal residence" and is established by being physically present in a place with the concurrent intent to make that place a domicile. To determine an individual's intent, the University evaluates his or her objectively verifiable conduct as an indicator of his or her state of mind.

Procedural Information

General. A student admitted to initial enrollment in an institution (or permitted to re-enroll following an absence from the institutional program which involved a formal withdrawal from enrollment) is classified by the admitting institution either as a resident or as a nonresident for tuition purposes prior to actual matriculation. In the absence of a current and final determination of the student's residence prior to matriculation, the student is classified a nonresident for tuition purposes. The institution will thereafter reach a final determination of the student's residence status. Unless a person supplies enough information to allow the admissions officer to classify him or her as a resident for tuition purposes, the person will be classified a nonresident for tuition purposes. A residence classification once assigned (and confirmed pursuant to any appellate process invoked) may be changed thereafter (with a corresponding change in billing rates) only at intervals corresponding with the established primary divisions of the academic calendar.

Transfer Students. When a student transfers from one North Carolina public institution of higher education to another, he or she is required to be treated as a new student by the institution to which he or she is transferring and must be assigned an initial residence classification for tuition purposes. The residence classification of a student by one institution is not binding on another institution. The North Carolina institutions of higher education will assist each other by supplying residency information and classification records concerning a student to another classifying institution upon request.

The transfer into or admission to a different component of the same institution (e.g., from an undergraduate to a graduate or professional program) is not construed as a transfer from one institution to another and thus does not by itself require a reclassification inquiry unless (1) the affected student requests a reclassification inquiry or (2) the transfer or enrollment occurs following the lapse of more than one quarter, semester, or term during which the individual was not enrolled as a student.

Responsibility of Students and Prospective Students. Any student or prospective student in doubt concerning his or her residence status bears the responsibility for securing a ruling by completing an application for resident status and filing it with the admissions officer. The student who, due to subsequent events, becomes eligible for a change in classification, whether from out-of-state to in-state or the reverse, has the responsibility of immediately informing the Office of Admissions of these circumstances in writing. Failure to give complete and correct information regarding residence constitutes grounds for disciplinary action.

Application Process. A person may obtain an application for resident status from his or her admissions office. Applicants for admission who claim eligibility for the in-state tuition rate customarily complete a two-page residency application as a part of the admissions application packet. Some applicants for admission will thereafter be required to complete a further, four-page, residency application. Enrolled students seeking a change from nonresident to resident status are required to complete a four-page residency application. All applications for resident status must be filed with the proper admissions office before the end of the term for which resident status for tuition purposes is sought. The last day of the final examination period is considered the last day of the term.

After filing a resident status application, a person may receive a letter from his or her admissions office requesting more information in connection with that application. When a student receives such a request before the end of the term for which classification is sought, he or she must respond to that request no later than three weeks after the end of the term. If the student receives the request for supplemental information after the end of the term in question, he or she must supply the requested information within three weeks after receipt of the request. Failure to supply the requested information within the specified time limit will result in a continuation of the student's nonresident classification unless good cause is shown for such failure.

The admissions office may require an applicant for admission to file a residency application, or respond to a request for more information, more quickly when residence status is a factor in the admissions decision.

The pamphlet "Information About Resident Status for Tuition Purposes" contains more details about the residency application process and is available at all admissions offices.

Fraudulent Applications. If a student is classified a resident for tuition purposes after submitting falsified residentiary information or after knowingly withholding residentiary information, the student's application for in-state tuition status is fraudulent. The institution may re-examine any application suspected of being fraudulent and, if warranted, will change the student's residence status retroactively to the beginning of the term with respect to which the student originally made the fraudulent application. If this occurs the student must pay the out-of-state tuition differential for all the enrolled terms intervening between the fraudulent application and its discovery. Further, knowing falsification of responses on a resident status application may subject the applicant to disciplinary consequences, including dismissal from the institution.

Burden of Proof and Statutory Prima Facie Evidence. A person has the burden of establishing facts which justify his or her classification as a resident for tuition purposes. The balancing of all the evidence must produce a preponderance of evidence supporting the assertion of in-state residence. Under the Statute, proof of resident status is controlled initially by one of two evidentiary beginning points which are stated in terms of prima facie evidence.

a. Even if the person is an adult, if his or her parents (or court-appointed guardian in the case of some minors) are not legal residents of North Carolina, this is prima facie evidence that the person is not a legal resident of North Carolina unless he or she has lived in this state the five consecutive years prior to enrolling or re-registering. To overcome this prima facie showing of nonresidence, a person must produce evidence that he or she is a North Carolina domiciliary despite the parents' nonresident status.

b. Conversely, if the person's parents are domiciliaries of North Carolina under the Statute, this fact constitutes prima facie evidence that the person is a domiciliary of North Carolina. This prima facie showing may also be overcome by other evidence to the contrary. If a person has neither living parents nor legal guardian, the prescribed prima facie evidence rule cannot and does not apply.

Erroneous Notices Concerning Classification. If a student, who has been found to be a nonresident for tuition purposes, receives an erroneous written notice from an institutional officer identifying the student as a resident for tuition purposes, the student is not responsible for paying the out-of-state tuition differential for any enrolled term beginning before the classifying institution notifies the student that the prior notice was erroneous.

Grace Period. If a student has been properly classified as a North Carolina resident for tuition purposes and, thereafter, his or her state of legal residence changes while he or she is enrolled in a North Carolina public institution of higher education, the statute provides for a grace period during which the student is allowed to pay tuition at the in-state rate despite the fact that the student is no longer a North Carolina legal resident. This grace period extends for a minimum of twelve months from the date of change in legal residence, and if the twelve-month period ends during a semester or academic term in which the student is enrolled, the grace period extends also to the end of that semester or academic term.

Reacquisition of Resident Tuition Status. The prescribed twelve-month period of legal residence may be shortened if the person seeking to be classified as a resident for tuition purposes was formerly classified a North Carolina resident for tuition purposes, abandoned North Carolina domicile, and reestablished North Carolina domicile within twelve months after abandoning it. Interested persons should consult their admissions offices for a detailed explanation of the conditions which must be met to qualify under this section.

Appeals. A student appeal of a classification decision made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the classification decision. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in that Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded the opportunity to appear and be heard by the Committee. Any student desiring to appeal a decision of the Residence Status Committee must give notice in writing of that fact (within ten days of receipt of the Committee's decision) to the Chairman of the Residence Status Committee, and the Chairman promptly processes the appeal for transmittal to the State Residence Committee.

It is the responsibility of the student to pay tuition at the rate charged and billed while an appeal is pending. In effect, the student who is classified a nonresident at the time of tuition billing pays the nonresident rate. Conversely, if a student is classified as a resident at the time of billing, he or she pays the resident rate. Any necessary adjustments in the rate paid will be made at the conclusion of the appeal.

Application of the Law to Specific Situations

Aliens. Aliens who are permanent residents of the U.S., or who hold a visa which will permit eventual permanent residence in the U.S., are subject to the same considerations with respect to determination of legal residence as citizens. An alien abiding in the U.S. under a visa conditioned at least in part upon intent not to abandon a foreign domicile (B, F, H, and J visas) cannot be classified a resident. An alien abiding in the U.S. under a visa issued for a purpose which is so restricted as to be fundamentally incompatible with an assertion by the alien of bona fide intent to establish a legal residence (C, D, and M visas) cannot be classified a resident.

Possession of certain other immigration documents may also allow an alien to be considered for in-state tuition status. For more details aliens should consult their admissions offices and the Manual. Aliens must file a Residence Status Supplemental Form in addition to the forms normally required of applicants for resident status for tuition purposes.

Married Persons. The domicile of a married person, irrespective of sex, is determined by reference to all relevant evidence of domiciliary intent. No person is precluded, solely by reason of marriage to a person domiciled outside of North Carolina, from establishing or maintaining legal residence in North Carolina. No person is deemed, solely by reason of marriage to a person domiciled in North Carolina, to have established or maintained a legal residence in North Carolina. The fact of marriage and the place of the domicile of his or her spouse are deemed relevant evidence to be considered in ascertaining domiciliary intent.

If a person otherwise can demonstrate compliance with the fundamental statutory requirement that he or she be a legal resident of North Carolina before the beginning of the term for which resident status is sought, the second statutory requirement relating to duration of residence may be satisfied derivatively, in less than twelve months, by reference to the length of the legal residence of the person's spouse, if the spouse has been a legal resident of the State for the requisite twelve-month period.

Military Personnel. The domicile of a person employed by the Federal government is not necessarily affected by assignment in or reassignment out of North Carolina. Such a person may establish domicile by the usual requirements of residential act plus intent. No person loses his or her in-state resident status solely by serving in the armed forces outside of the State of North Carolina.

Minors. A minor is any person who has not reached the age of eighteen years. Under the common law, a minor child whose parents are not divorced or legally separated is presumed to have the domicile of his or her father. This presumption may be rebutted if a preponderance of the evidence indicates that the mother and father have separate domiciles and that, under the circumstances, the child can fairly be said to derive his or her domicile from the mother. If the father is deceased, the domicile of the minor is that of the surviving mother. If the parents are divorced or legally separated, the domicile of the minor is that of the parent having custody by virtue of a court order; or, if no custody has been granted by virtue of court order, the domicile of the minor is that of the parent with whom he or she lives; or, if the minor lives with neither parent, in the absence of a custody award, the domicile of the minor is presumed to remain that of the father. If the minor lives for part of the year with each parent, in the absence of a custody award, the minor's domicile is presumed to remain that of the father. These common law presumptions control even if the minor has lived in North Carolina for five years as set forth above in Burden of Proof and Statutory Prima Facie Evidence, subsection a.

In determining residence status for tuition purposes, there are three exceptions to the above provisions:

1. If a minor's parents are divorced, separated, or otherwise living apart and one parent is a legal resident of North Carolina; during the time period when that parent is entitled to claim, and does claim, the minor as a dependent on the North Carolina individual income tax return, the minor is, deemed to be a legal resident of North Carolina for tuition purposes, notwithstanding any judicially determined custody award with respect to the minor.

If, immediately prior to his or her eighteenth birthday, a person would have been deemed to be a North Carolina legal resident under this provision but he or she achieves majority before enrolling in a North Carolina institution of higher education, that person will not lose the benefit of this provision if the following conditions are met:

a. Upon achieving majority the person must act, as much as possible, in a manner consistent with bona fide legal residence in North Carolina; and

b. The person must begin enrollment at a North Carolina institution of higher education not later than the fall academic term next following completion of education prerequisite to admission at the institution.

2. If, immediately prior to beginning an enrolled term, the minor has lived in North Carolina for five or more consecutive years in the home of an adult relative (other than a parent) who is a legal resident of North Carolina, and if the adult relative, during those years, has functioned as a de facto guardian of the minor, then the minor is considered a legal resident of North Carolina for tuition purposes. If a minor qualified for resident status for tuition purposes under this provision immediately prior to his or her eighteenth birthday, then, upon becoming eighteen, he or she will be deemed to be a legal resident of North Carolina of at least twelve months' duration.

3. Even though a person is a minor, under certain circumstances the person may be treated by the law as being sufficiently independent from his or her parents as to enjoy a species of adulthood for legal purposes. If the minor marries or obtains a judicial decree of emancipation under N.C. Gen. Stat. 7A-717, et seq., he or she is emancipated. The consequence, for present purposes, of such emancipation is that the affected person is presumed to be capable of establishing a domicile independent of that of the parents; it remains for that person to demonstrate that a separate domicile has, in fact, been established.

Prisoners. There are special provisions concerning domicile of prisoners. For more information, persons to whom these provisions may apply should consult the Manual.

Property and Taxes. Ownership of property in or payment of taxes to the State of North Carolina apart from legal residence will not qualify one for the in-state tuition rate.

Students or prospective students who believe that they are entitled to be classified residents for tuition purposes should be aware that the processing of requests and appeals can take a considerable amount of time and that applications for classification should not be delayed until registration, when the number of applications makes accelerated handling impossible.

Military Tuition Benefit

The information in this section comes from three sources: (i) North Carolina General Statutes, 116-143.3, (ii) A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes, Revised September 1985, (iii) Chancellor's Rules and Procedures for Residence Classification of Students for Tuition Purposes and Determination of Eligibility for the Special Military Tuition Benefit.

Certain members of the Armed Services, and their dependent relatives, who are not residents for tuition purposes may become eligible to be charged less than the out-of-state tuition rate under N.C. Gen. Stat. 116-143.3, the military tuition benefit provision. Any person seeking the military tuition benefit must qualify for admission to UNC-Chapel Hill and must file an application for the benefit with his or her admissions office before the first day of classes of the term for which he or she initially seeks the benefit. To remain eligible to receive the military tuition benefit, he or she must file another application for the benefit before the first day of classes of the first term in which he or she is enrolled in each academic year. The burden of proving eligibility for the military tuition benefit lies with the applicant for the benefit, and the application and all required supporting affidavits must be complete and in proper order before the first day of classes of the term in question. Because of the time involved in securing the necessary affidavits from the appropriate military authorities, prospective applicants for the military tuition benefit are urged to secure application forms from their admissions offices and begin the application process several weeks before the first day of classes of the term for which they seek the benefit.

Eligibility of Members of the Armed Services. Eligible members of the Armed Services pay a rate of tuition computed by applying a statutory formula which is dependent, in part, on the amount of money payable by their Service employer to them or to the institution by reason of their enrollment. Application of the statutory formula yields the following results: if the service

member's education is being fully funded by the Service employer, the amount of tuition owed is equal to out-of-state tuition; if the member's education is not being funded by his or her Service employer, he or she pays an amount equal to in-state tuition; and if the Service employer is providing partial educational funding, the amount of tuition owed depends on the amount of funding contributed by the Service employer.

To be eligible for this military tuition benefit, the individual must

a. be a member of the United States Air Force, Army, Coast Guard, Marine Corps, Navy, North Carolina National Guard, or a reserve component of one of these services; and

b. be abiding in North Carolina incident to active military duty which is performed at or from a duty station in North Carolina.

Eligibility of Dependent Relatives of Service Members. If the service member meets the conditions set forth above, his or her dependent relatives may be eligible to pay the in-state tuition rate if they share the service member's North Carolina abode; if they have complied with the requirements of the Selective Service System, if applicable; and if they qualify as military dependents of the service member.

If the service member voluntarily ceases to live in North Carolina or is involuntarily absent from the state on military orders (other than absences on routine maneuvers and temporary assignments), he or she is deemed to have moved his or her abode from North Carolina. If a dependent relative of a service member has become eligible for the military tuition benefit and, after the beginning of the term of eligibility, the service member moves his or her abode from North Carolina, the dependent relative will continue to be eligible for the military tuition benefit only for the remainder of that academic year. An academic year runs from the first day of classes of the fall semester through the last day of exams of the following summer session, second term.

For a detailed explanation of the military tuition benefit provision (including an explanation of the formula used to compute the tuition rate for service members), a complete list of categories of persons who are considered "dependent relatives" for purposes of establishing eligibility for the military tuition benefit, and information about the registration requirements of the Selective Service System, applicants should consult A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes (as amended September 1985). This Manual is available for inspection in the Admissions Offices of the University. Copies of the Manual are also on reserve at the Robert B. House Undergraduate Library, and in the Reserve Reading Room of the Health Sciences Library.

Appeals of Eligibility Determinations of Admissions Officers. A student appeal of an eligibility determination made by any admissions officer must be in writing and signed by the student and must be filed by the student with that officer within fifteen working days after the student receives notice of the eligibility determination. The appeal is transmitted to the Residence Status Committee by that officer, who does not vote in that Committee on the disposition of such appeal. The student is notified of the date set for consideration of the appeal, and, on request of the student, he or she is afforded an opportunity to appear and be heard by the Committee.

Any student desiring to appeal a determination of the Residence Status Committee must give notice in writing of that fact to the Chairman of the Residence Status Committee within ten days of receipt of the Committee's decision. The Chairman will promptly process the appeal for transmittal to the State Residence Committee.

Family Educational Rights and Privacy Act

As a general rule, under the federal Family Educational Rights and Privacy Act (FERPA), personally identifiable information may not be released from a student's education records without his or her prior written consent. Exceptions to this rule are set out in the FERPA regulations and the FERPA policy of The University of North Carolina at Chapel Hill.

UNC-Chapel Hill will disclose personally identifiable information from the education records of a student, without the student's prior written consent, to officials of another school or school system in which the student seeks or intends to enroll. UNC-Chapel Hill will also disclose personally identifiable information from an enrolled student's education records, without the student's prior written consent, to officials of another school or school system in which the student is contemporaneously enrolled. Time, building, and room number information from a student's class schedule will be disclosed to the University Police to assist them in serving the student with a warrant or subpoena.

UNC-Chapel Hill makes public certain information that has been designated as "directory information": the student's name, address, telephone listing, date and place of birth, major field of study, class, enrollment status (full-time, half-time, or part-time), participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. Examples of ways in which some of this information is made public include: names of students who receive honors and awards, who make the Dean's List, who hold offices, or who are members of athletic teams. The annual commencement program publishes the names of degree recipients. The University also publishes the Campus Directory annually, and some professional and graduate student groups publish directories of students in their departments or schools.

Students who do not wish to have any or all "directory information" made public without their prior consent, must send the Office of the University Registrar (CB# 2100, 105 Hanes Hall, The University of North Carolina at Chapel Hill) a signed and dated notice specifying items that are not to be published. To ensure that a listing for the student will not appear in the Campus Directory, this notice must be received by the Office of the University Registrar by the end of the registration period for the semester or session of first enrollment or, after an absence, of reenrollment. Such a notice will be honored until the student graduates, ceases to attend, or withdraws from the University unless the student notifies the Office of the University Registrar to the contrary in writing.

Students also have the right to inspect their "education records" as defined in the FERPA regulations. They may not inspect financial records and statements of their parents; confidential letters of recommendation placed in their education records before January 1, 1975 (with some exceptions); or confidential letters of recommendation placed in their education records after January 1, 1975, if they have waived their rights to inspect and review such letters.

A student who believes that information in his or her education records is inaccurate or misleading or violates his or her privacy or other rights may request that the institution amend the records, and, if the request is denied, he or she has the right to a hearing. If, after the hearing, the institution decides that the information is not inaccurate, misleading, or violative of privacy or other rights, the student has a right to place a statement in those records commenting on the information in question or giving the student's reasons for disagreeing with the institutional decision. The student may also place such a statement in his or her records in lieu of requesting a hearing if the student and the institution agree that an explanatory statement alone is the appropriate remedy. Complaints alleging violations of FERPA rights may also be filed with the U.S. Department of Education.

Questions about FERPA should be addressed to the Legal Adviser to the Special Assistant to the Chancellor (CB# 9150, 01 South Building). The text of FERPA and its regulations and the University's FERPA policy are also available for inspection in 01 South Building.

Firearms and Other Weapons

The possession of any gun, rifle, pistol, dynamite cartridge, bomb, grenade, mine, explosive, bowie knife, dirk, dagger, slingshot, leaded cane, switchblade knife, blackjack, metallic knuckles, or any other weapons of like kind upon any University campus or in any University owned or operated facility is unlawful and contrary to University policy. Violation of this prohibition is a misdemeanor punishable by a fine not to exceed $500 and/or six months' imprisonment, and may constitute a violation of the Campus Code.

Immunization Requirement

Effective July 1, 1986, North Carolina State law requires that no person shall attend a college or university in North Carolina unless a certificate of immunization indicating that the person has received the immunizations required by the law is presented to the college or university on or before the first day of matriculation. Students enrolled at UNC-Chapel Hill on July 1, 1986 are exempt from this requirement.

If the UNC-Chapel Hill Medical History Form containing the certificate of immunization is not in the possession of the UNC-Chapel Hill Student Health Service ten (10) days prior to the registration date, the University shall present a notice of deficiency to the person. The person shall have 30 calendar days from the first day of attendance to obtain the required immunizations. Those persons who have not complied with the immunization requirements by the end of 30 calendar days will be administratively withdrawn from the University.

Policy on Illegal Drugs

I. Introduction

The Board of Trustees of The University of North Carolina at Chapel Hill, in conformity with the direction of the Board of Governors of The University of North Carolina, hereby adopts this Policy on Illegal Drugs, effective August 24, 1988. It is applicable to all students, faculty members, administrators, and other employees.

II. Education, Counseling, and Rehabilitation

A. The University of North Carolina at Chapel Hill has established and maintains a program of education designed to help all members of the university community avoid involvement with illegal drugs. This educational program emphasizes these subjects:

1. The incompatibility of the use or sale of illegal drugs with the goals of the university;
2. The legal consequences of involvement with illegal drugs;
3. The medical implications of the use of illegal drugs; and
4. The ways in which illegal drugs jeopardize an individual's present accomplishments and future opportunities.

B. The University of North Carolina at Chapel Hill provides information about drug counseling and rehabilitation services available to members of the university community through campus-based programs and through community-based organizations. Persons who voluntarily avail themselves of university services are hereby assured that applicable professional standards of confidentiality will be observed.

III. Enforcement and Penalties

A. The University of North Carolina at Chapel Hill shall take all actions necessary, consistent with State and Federal law and applicable university policy, to eliminate illegal drugs from the university community. The University's Policy on Illegal Drugs is publicized in catalogs and other materials prepared for all enrolled and prospective students and in materials distributed to faculty members, administrators, and other employees.

B. Students, faculty members, administrators, and other employees are responsible, as citizens, for knowing about and complying with the provisions of North Carolina law that make it a crime to possess, sell, deliver, or manufacture those drugs designated collectively as "controlled substances" in Article 5 of Chapter 90 of the North Carolina General Statutes. Any member of the university community who violates that law is subject both to prosecution and punishment by the civil authorities and to disciplinary proceedings by the university. It is not "double jeopardy" for both the civil authorities and the university to proceed against and punish a person for the same specified conduct. The university will initiate its own disciplinary proceeding against a student, faculty member, administrator, or other employee when the alleged conduct is deemed to affect the interests of the university.

C. Penalties will be imposed by the university in accordance with procedural safeguards applicable to disciplinary actions against students, faculty members, administrators, and other employees, as required by Section 3 of the Trustee Policies and Regulations Governing Academic Tenure in The University of North Carolina at Chapel Hill, by Section III.D of the Employment Policies for EPA Nonfaculty Employees of The University of North Carolina at Chapel Hill, by regulations of the State Personnel Commission, and the Disciplinary Procedure of the Staff Personnel Administration Guides (SPAG 37), by the Instrument of Student Judicial Governance, and by all other applicable provisions of the policies and procedures of The University of North Carolina at Chapel Hill.

D. The penalties to be imposed by the university may range from written warnings with probationary status to expulsions from enrollment and discharges from employment. However, the following minimum penalties shall be imposed for the particular offenses described.

1. Trafficking in Illegal Drugs

a. For the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90 (including, but not limited to, heroin, mescaline, lysergic acid diethylamide, opium, cocaine, amphetamine, methaqualine), any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.

b. For a first offense involving the illegal manufacture, sale or delivery, or possession with intent to manufacture, sell or deliver, of any controlled substance identified in Schedules III through VI, N.C General Statutes 90-91 through 90-94, (including, but not limited to, marijuana, anabolic steroids, pentobarbital, codeine), the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent. (Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.) For a second offense, any student shall be expelled and any faculty member, administrator, or other employee shall be discharged.

2. Illegal Possession of Drugs

a. For a first offense involving the illegal possession of any controlled substance identified in Schedule I, N.C. General Statutes 90-89, or Schedule II, N.C. General Statutes 90-90, the minimum penalty shall be suspension from enrollment or from employment for a period of at least one semester or its equivalent. (Employees subject to the State Personnel Act are governed by regulations of the State Personnel Commission. Because the minimum penalty specified in this Section and required by the Board of Governors exceeds the maximum period of suspension without pay that is permitted by State Personnel Commission regulations, the penalty for a first offense for employees subject to the State Personnel Act is discharge.)

b. For a first offense involving the illegal possession of any controlled substance identified in Schedules III through VI, N.C. General Statutes 90-91 through 90-94, the minimum penalty shall be probation, for a period to be determined on a case-by-case basis. A person on probation must agree to participate in a drug education and counseling program, consent to regular drug testing, and accept such other conditions and restrictions, including a program of community service, as the Chancellor or the Chancellor's designee deems appropriate. Refusal or failure to abide by the terms of probation shall result in suspension from enrollment or from employment for any unexpired balance of the prescribed period of probation. (If this balance for an employee subject to the State Personnel Act exceeds three days, that employee shall be discharged.)

c. For a second or other subsequent offenses involving the illegal possession of controlled substances, progressively more severe penalties shall be imposed, including expulsion of students and discharge of faculty members, administrators, or other employees.

E. Suspension Pending Final Disposition

When a student, faculty member, administrator, or other employee has been charged by the university with a violation of policies concerning illegal drugs, he or she may be suspended from enrollment or employment before initiation or completion of regular disciplinary proceedings if, assuming the truth of the charges, the Chancellor, or in the Chancellor's absence, the Chancellor's designee concludes that the person's continued presence within the university community would constitute a clear and immediate danger to the health or welfare of other members of the university community; provided, that if such a suspension is imposed, an appropriate hearing of the charges against the suspended person shall be held as promptly as possible thereafter.

IV. Implementation and Reporting

Annually, the Chancellor shall submit to the Board of Trustees a report on campus activities related to illegal drugs for the preceding year. The reports shall include, as a minimum, the following:

(1) a listing of the major education activities conducted during the year;

(2) a report on any illegal drug-related incidents, including any sanctions imposed;

(3) an assessment by the Chancellor of the effectiveness of the campus program and;

(4) any proposed changes in the Policy on Illegal Drugs.

A copy of the report shall be provided to the President, who shall confer with the Chancellor about the effectiveness of campus programs.

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BOUNDARY STREET
MCCAULEY STREET
VANCE STREET
UNIVERSITY LAKE
BUSINESS DISTRICT
UNIVERSITY SQUARE
GRANVILLE TOWERS
FRAT COURT
CAROLINA INN
PEABODY
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SITTERSON HALL
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HOUSE UNDERGRAD LIBRARY
DANIELS STUDENT STORES
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INTRAMURAL FIELD
FETZER GYMNASIUM
WOOLLEN GYMNASIUM
CARMICHAEL AUDITORIUM
GEORGE WATTS HILL ALUMNI CENTER
NAVY FIELD
RAMSHEAD PARKING LOT
AVERY
BOSHAMER BASEBALL STADIUM
INTRAMURAL FIELD
CLUBHOUSE
TENNIS COURTS
MEMORIAL HOSPITAL
BURNETT-WOODHOUSE
MACNIDER
MARY ELLEN LOVE
BRAUER
MACNAUGHTON
BRINKHOUS-BULLITT
MARY ELLEN LOVE
BRAUER
MACNAUGHTON
BRINKHOUS-BULLITT
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HEALTH AFFAIRS PARKING DECK
HEALTH AFFAIRS
GROUNDS BUILDINGS
ODUM VILLAGE STUDENT FAMILY HOUSING
JACKSON CIRCLE
HIBBARD DRIVE
BERNARD STREET
MASON FARM ROAD
DEAN E. SMITH CENTER
COUPS AUDITORIUM
CHILLER BUILDING
NEHAN CENTER
ATHLETIC TRACK
AYCOCK FAMILY MEDICINE
N.C. BOTANICAL GARDENS
CLOVERLEAF
WATER TOWER PARKING LOT
WATER TANK
POWER PLANT
ELECTRICAL SUBSTATION
STATE EMPLOYEES CREDIT UNION
BOARD PHARMACY
BELL TOWER PARKING LOT
NCNB PLAZA #4
SCHOOL OF SOCIAL WORK
PARK PLACE PARKING LOT
HIGHWAY 54 PARKING LOT
US 15-501 TO PITTSBORO
US 15-501 BY PASS
US 15-501 BY PASS WEST
NC 54 TO I-40 & RALEIGH
US 15-501 TO DURHAM
TO CAMPUS
TO N. PASS
TO PITTSBORO
TO I-40 & RALEIGH
TO EDUCATION CENTER (SEE MAP B)
NO MANNING DRIVE INTERSECTION

Index of Campus Buildings (central campus only)

Academic Affairs and Administrative Buildings

Name	Map Ref.
Abernethy	G-5
Abernethy Annex	G-5
Ackland Art Museum	G-4
Alumni Center, George Watts Hill (Alumni Office)	J-11
Alumni Hall (Anthropology)	J-5
Arboretum, Coker	K-5
Airport Road, 720 (Bolin Creek)	U-27
Airport Road, 725 (Human Resources)	U-26
Airport Road, 730 (Bolin Creek)	U-26
Art Studio Building, Airport Road	U-24
Battle Hall (Human Resources, Social Work)	I-4
Bell Tower, Morehead-Patterson	I-9
Bennett Building (Printing Services)	H-13
Bingham Hall (Speech Communication)	I-7
Boshamer Baseball Stadium	L-12
Bowman Gray Swimming Pool (in Woolen Gym)	K-9
Brooks Hall (UNC Press)	N-5
Bynum Hall (Cashier, Graduate School, Research Services)	J-6
Caldwell Hall (Philosophy, Int. Programs, I.R.S.S.)	J-6
Carmichael Auditorium	L-9
Carolina Inn	F-6
Carr Building (Institutional Research, Systems and Procedures, Housing Offices)	J-6
Corroll Hall (Kenan Flagler Business School)	H-7
Chase Hall (AFROTC, Auxiliary Services)	J-13
Chiller Building (East Side)	I-18
Coker Hall (Biology)	H-8
Cogeneration Facility (Power Plant)	B-6
Daniels Building (Student Stores)	J-8
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Dey Hall (Modern Foreign Language)	H-7
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Evergreen House (Leisure Studies and Recreation Administration)	G-5
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Fetzer Gymnasium, Robert A. (Physical Educ.)	K-9
Fordam Hall Christopher C. III (Bialogy)	G-9
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Franklin Street, 134 1/2 East (Highway Safety Research)	G-4
Franklin Street, 440 West	B-3
Gardner Hall (Economics)	H-7
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Greenhouse	K-5
Greenlaw (English)	J-7
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Hanes Art Classroom Building	G-4
Hanes Hall (Registror, Placement, Microcomputing Support)	H-6
Hickerson House (Urban and Regionol Studies)	L-4
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Hill Hall (Music)	H-5
Hill Hall Annex (Music)	H-4
Howell Hall (Journolism and Mass Communication)	J-5
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Kenan Loboratories (Chemistry)	H-8
Kenan Stodium	I-10
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Moil Center (in Hamilton Hall)	J-7
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Morehead Planetarium (Visitors' Center)	J-4
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Nash Hall (University Counseling Center)	E-7
Naval ROTC Armory (Naval Science)	G-7
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New West Hall (Mathematics, Statistics, Arts and Sciences)	H-5
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Paul Green Theatre	N-8
Peabody Hall (School of Eduçation)	G-6
Person Hall (Music)	H-5
Pettigrew Hall (Student Aid, Summer School, Affirmative Action)	I-4
Phillips Hall (Mathematics, Physics and Astronomy, Statistics)	H-6
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Porthole Building (Development, Highway Safety Research)	G-4
Saunders Hall (Geography, Religious Studies)	J-6
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Sitterson Hall, Joseph Carlyle (Computer Science)	G-6
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Old West	I-5
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Taylor Hall (Swing Building)	C-11

Academic Year, 1993-94	Fall Semester, 1993	Spring Semester, 1994
Semester Opens	Wednesday, August 18	Tuesday, January 4
Registration Begins	Wednesday, August 18	Tuesday, January 4
Orientation/Acad. Counseling	Sunday, August 22	
First Day of Classes	Wednesday, August 25	Monday, January 10
Last Day for Late Registration	Tuesday, August 31	Friday, January 14
Holiday, Martin Luther King		Monday, January 17
Holiday, Labor Day	Monday, September 6	
Holiday, University Day	Tuesday, October 12	
Fall/Spring Recess Begins	Wednesday, Oct. 20, 5:00 PM	Friday, Mar. 4, 5:00 PM
Instruction Resumes	Monday, Oct. 25, 8:00 AM	Monday, Mar. 14, 8:00 AM
Thanksgiving Recess Begins	Wednesday, Nov. 24, 1:00 PM	
Instruction Resumes	Monday, Nov. 29, 8:00 AM	
Holiday, Good Friday		Friday, April 1
Last Day of Classes	Thursday, December 9	Wednesday, April 27
Reading Day	Friday, December 10	Thursday, April 28
Final Examinations	Sat.-Sat., December 11-18	Fri.-Fri., Apr. 29-May 6
Commencement		Sunday, May 15

Summer School, 1994	First Session	Second Session
Registration Begins	Monday, May 16	Thursday, June 23
First Day of Classes	Thursday, May 19	Tuesday, June 28
Last Day for Late Registration	Friday, May 20	Wednesday, June 29
Holiday	Monday, May 30	Monday, July 4
Last Day of Classes	Tuesday, June 21	Friday, July 29
Reading Day	Wednesday, June 22	Saturday, July 30
Final Examinations	Thu.-Fri., June 23-24	Mon.-Tue., Aug. 1-2

Some Summer School courses are offered on a different calendar. A list of longer and shorter courses, with different starting and ending dates is included under the section Special Sessions in the Summer School catalog or the Directory of Classes.

Academic Year, 1994-95	Fall Semester, 1994	Spring Semester, 1995
Semester Opens	Wednesday, August 17	Thursday, January 5
Orientation/Acad. Counseling	Sunday, August 21	
First Day of Classes	Wednesday, August 24	Monday, January 9
Last Day for Late Registration	Tuesday, August 30	Friday, January 13
Holiday, Martin Luther King		Monday, January 16
Holiday, Labor Day	Monday, September 5	
Fall/Spring Recess Begins	Wednesday, Sept. 28, 5:00 PM	Friday, Mar. 3, 5:00 PM
Instruction Resumes	Monday, Oct. 3, 8:00 AM	Monday, Mar. 13, 8:00 AM
University Day	Wednesday, Oct. 12	
Thanksgiving Recess Begins	Wednesday, November 23, 1:00 PM	
Instruction Resumes	Monday, November 28, 8:00 AM	
Holiday, Good Friday		Friday, April 14
Last Day of Classes	Wednesday, December 7	Wednesday, April 26
Reading Day	Thursday, December 8	Thursday, April 27
Reading Day	Friday, December 9	Friday, April 28
Final Examinations	Sat.-Sat., December 10-17	Sat.-Sat., Apr. 29-May 6
Commencement		Sunday, May 14

The Office of Undergraduate Admissions

The University of North Carolina at Chapel Hill
[illegible], Jackson Hall
Chapel Hill, NC 27599-2200

(919) 966-3621 Information
(919) 962-8179 Application

The Office of Scholarships and Student Aid

The University of North Carolina at Chapel Hill
CB# 2320, 300 Vance Hall
Chapel Hill, NC 27599-2320

(919) 962-8396

The Office of Undergraduate Studies

School of Nursing
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The Office of Student Services

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"This publication has been produced on the occasion of the University of North Carolina at Chapel Hill's Bicentennial Observance, celebrated from October 1993 to May 1994. This anniversary commemorates the birth of public higher education in the United States."

School of Nursing *University of North Carolina at Chapel Hill*

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